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BREATHE
AND
BE WELL
—
WILLIAM LEE HOWARD MD

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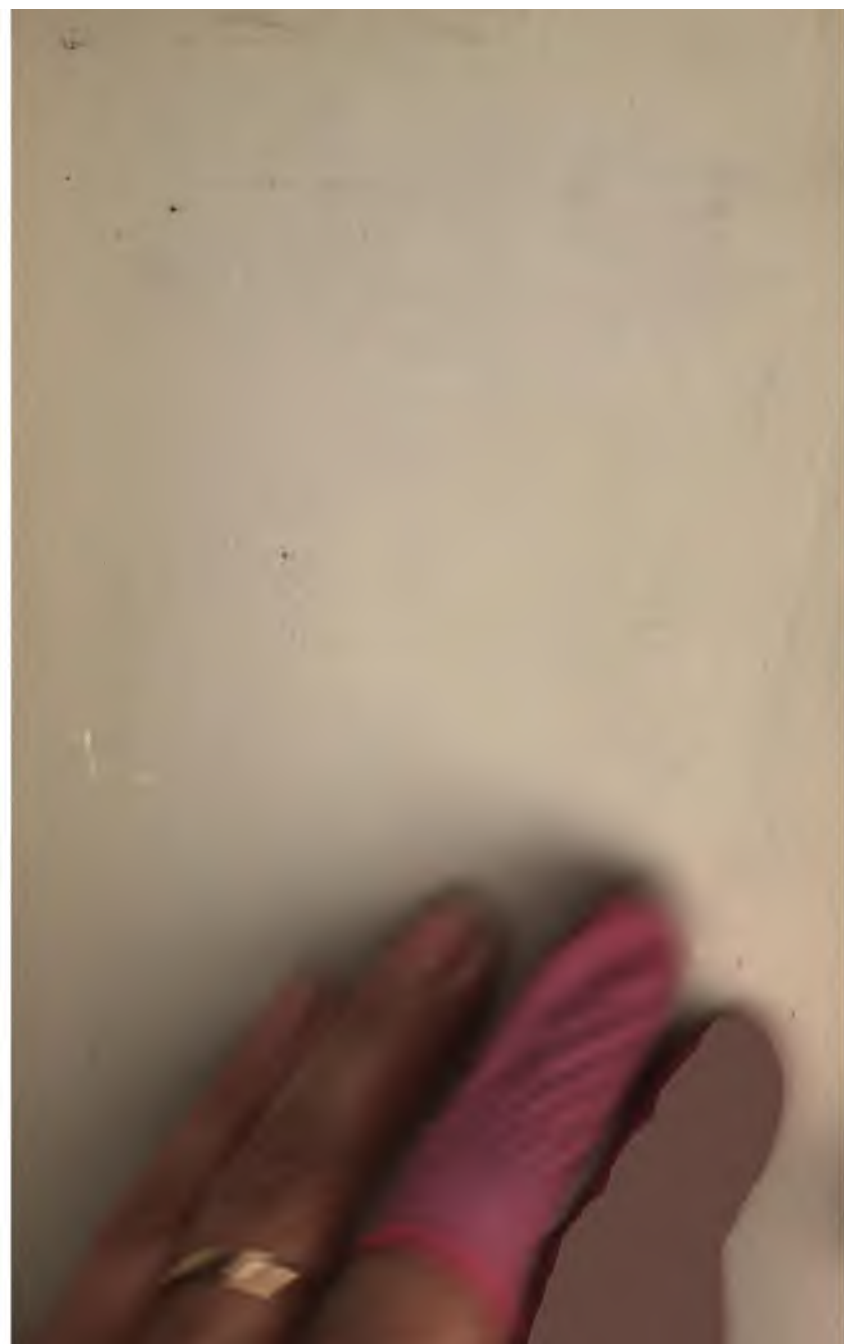
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BREATHE AND BE WELL

BOOKS BY
WM. LEE HOWARD, M.D.

**SEX PROBLEMS IN WORRY AND
WORK**

FACTS FOR THE MARRIED

PLAIN FACTS ON SEX HYGIENE

**CONFIDENTIAL CHATS
WITH BOYS**

**CONFIDENTIAL CHATS
WITH GIRLS**

BREATHE AND BE WELL

BREATHE AND BE WELL

BY

WILLIAM LEE HOWARD, M.D.

Author of

"Sex Problems in Worry and Work," etc.



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FOREWORD

OPTIMISM means to me Humanity. To be impatient with humanity is stupid pessimism. I have no warfare against those who have neglected their latent physical forces, but an urgent desire to show them how to use and conserve these powers and forces.

The general public are not upon familiar terms with their bodies. They are better acquainted with diseases than with health. Poor health, in distinction to disease, is almost invariably due to lack of understanding that the body is a machine which must have proper fuel for combustion and its boilers, pipes and exhausts must always be kept clean—that oxygen must be supplied in sufficient quantity, must burn up waste material every living minute as well as supply energy and new living stuff.

The secret is in knowing how to enlarge

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FOREWORD

the combustion chambers and control intake and outgo.

The purpose of this little book is to show how it should and can be done without littering the reader's mind with physiological explanations and technical terms and details.

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BREATHE AND BE WELL



CHAPTER I

GENERAL OBSERVATIONS UPON HEALTH

“Most of the ills which we poor mortals know,
From doctors and imagination flow.”

—CHURCHILL.

IF life is short and art is long, why not change this by prolonging life through the art of breathing? A rather mixed epigram, perhaps, but it has instructive meaning. One can live longer and live better by knowing how to breathe properly; and knowing how to do this is an art by itself, requiring patience and practice as well as the riddance of many antiquated ideas of man's place and work in this world.

I learned the first principles of the art of breathing from a pet horse. He is now a pensioner, living on the best and getting with me the pure country air. He is near-

ing thirty years, but, with the exception of failing sight, is as lithe, handsome and full-muscled as a youngster.

Not having any jumping or running exercises he still insists upon filling his lungs to the full, when let out in the paddock every morning, rain or shine, snow or storm. He takes a little gallop, then stops with legs spread outward and wide apart, lifts his head and neck until there is no bend or stricture of the breathing canals, and gives a loud, whistling snort. This snort empties his lungs. You can see his big chest contract. He does not then take a deep inhalation, but continues to blow out of his lungs every bit of stale air. This accomplished, he commences slowly to take in air until his chest, veins and arteries fairly swell. His muscles become rigid, and, with a final roaring snort, the exercise is over for the morning, and he starts grazing.

I have noticed this trick with all big animals when released to the open. I have also seen feeble attempts by those kept most of

the time in close stables and harnessed before they can open their lungs to their real capacity. Not being able to start on their daily work with a purified physical organization, they soon grow listless and aged before their allotted time.

Most of us are stabled animals and jump from our sleeping stalls to put on tight neckwear or confining waistbands before we have had a good snort in fresh air and a run around the paddock.

If a blacksmith pushed down the bellows only two-thirds of their depth, that is if he failed to use one-third of their air space, the coals would fail to give him all their latent energy. Also, he would have to use more effort himself and, in the end, would find left over many half or partly burnt coals, clogging ashes. And, unless he was aware of the real cause, he would put the blame upon the fuel.

The same conditions are true of the steam engine. Its drafts—bellows—must be given full opportunity to throw air into the fuel;

get all possible energy out of it and leave only fine ashes. If these conditions do not prevail, potential energy is dissipated, fire-boxes become clogged and pipes and boilers lined with the by-products of insufficient combustion. Then come all sorts of troubles; sometimes the intricate machinery is ruined—goes to the scrap heap.

Many men and women go to the human scrap heap for similar reasons. They have not known just how to pump the human bellows—the lungs; get energy out of every ounce of fuel, keep their arteries and veins clean, kidneys and liver from being poisoned by unconsumed material.

Fresh air is the staff of life. No man or woman can reach the best possible growth and development if deprived of fresh air for a few hours every day. One may live in a room where fresh air constantly circulates, yet not get its benefit through wrong starts in the morning and ignorance of the right methods of breathing.

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We cast off and put on new growths every minute of our lives. Growing old in the fifties or sixties is an unnatural state of affairs. It is a symptom of carelessness, or ignorance of the human machine. Let every cell in the body—and the body is only an aggregation of differentiated cells—receive blood purified by oxygen, and, organic disease being absent, the man or woman of sixty can keep on renewing health and energy. Yes; even if at this age there is a clogging of unburnt stuff; creaking joints, difficult breathing upon physical effort, rapid heart-beats; you can renew somewhat your whole body. You can clean out the deleterious material and start afresh.

If you will recall the lives of famous singers you will be surprised to notice how long-lived they were, and how full of energy and charm are those now living who have passed their threescore. Now, one of the first things a singer has to learn is to breathe correctly.

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When you attempt to run some distance there comes a "stitch in the side." It is a good sign for you if you profit by it. It is good to exercise to the point of getting that "stitch." What it really means is that you have discovered a large area of unused lung cells which you did not know existed in you. These have remained closed most of your life, since the passing of childhood and its games, and are now opening to receive the fresh air you are pumping in through extra efforts to breathe.

These unused cells are slightly stuck together and collapsed upon themselves. The sharp pain is due to the air forcing them apart. When you keep going and the distress is over, you get into what, in sporting terms, is called "second wind." You are then using all your bellows' capacity and force. You are burning a lot of stored-up waste material and also giving new life to internal organs.

It is not the tall, big-boned individual

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who lives the longest and best resists diseases. It is the big-chested, compact man and woman, for it is equally necessary, even more important, for the woman to have big lung space.

About one-third of lung capacity is unused by the average person. This third is the lower portion of the lungs—where you get that “stitch in the side.”

The human bellows differs from the mechanical in having its leathery covering contain a spongy mass of air cells. Around these air cells flows the blood. It reaches every cell open for it. Remember this distinction—“every cell open for it.” All impurities in the blood are burnt up by the oxygen sent to it. Then the building blood is sent by means of the arteries to every portion, organ and cell in the body. Upon its return to the lungs by the way of the veins and right heart, it carries waste stuff in the form of carbonic acid, which is thrown off when you exhale your breath.

Right here is where so many breathe

wrongly—they take deep inhalations, but neglect the absolutely necessary forcible exhalations. You can do as the horse does in this matter without the audible snort. Those who practice deep breathing usually try to see how full they can inflate the chest, but not how completely they can empty it.

In the human machine the burning and purifying, the cleansing and renewing are intended to keep the body active and young from the root of the hairs to the little toe nail. And in all animals free in the open, it is an involuntary act and should be so in man. But too often man's neglect of his mechanical forces leads to self-destruction. If there is any mechanical obstruction, such as too tight shoes or garters, wrong sitting postures, as examples, which prevents the blood from carrying away dead material from the toe and replacing it with new, we have the commencement of death in the toe. This is true of any part of the body where there is some interference

or interruption of the blood flow, or what is better said, of the fresh-air effects of proper breathing.

This rotting off of an extremity we call gangrene. Poor or imperfect circulation is the real cause of this most horrible condition, and imperfect circulation is mostly due to imperfect breathing, barring the mechanical obstructions. To be sure, gangrene usually occurs in the aged; aged because the individuals have not used the full capacity of their lungs during active life. The gangrene occurring among wounded soldiers is quite another matter, although here its primary cause is mechanical—shot wounds, allowing the entrance of noxious gases and germs. In the present world war it is complicated by the breathing in of poisonous gases.

But the destruction of extremities and even internal organs in the aged is due to the fact that as the years have gone on the blood has had less and less oxygen to send to the extremities to burn up the soot clog-

ging the tiny arteries and veins. Yet all these destroying conditions might have been avoided.

The woman who eats rich, nitrogenous food, is tightly laced and never more than half breathing, leaves a lot of unburnt fuel in her system. When attacked by indigestion, and later on finds she has inelastic arteries—hardening of the arteries—she blames the food and starts dieting—the very worst thing she could do.

What such a woman needs is freedom to breathe way down to the bottom of her abdomen—"stomach"—allow oxygen to set fire to the waste material; release energy for abdominal muscles to work. Under these natural conditions she could eat anything within reason and preserve her form.

Fashion for women makes the superfluous necessary in clothes, but it also causes a superfluity of flesh which is an abomination. To attempt to show how necessary it is to dress so as to breathe in such a

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manner as to keep thin, is like trying to bore a hole in a cloud.

You can burn off fat by internal combustion. You can keep the flesh firm, and all your body curves and attractions, by the habit of proper breathing. Doctors, diet and distress are kept away by the woman who uses to the full her breathing apparatus. The same applies to the over-fat man.

Most people fail to develop chest capacity to its fullest extent even through systematic exercise, because the powerful pushing muscle of the human bellows is not developed and kept under voluntary control when needed.

This muscle is the diaphragm—a big flat muscle. It forms the floor of the chest cavity and separates it from the abdominal cavity. In other words the trunk of the body is a two-story building. The upper story is where you really live and keep your resources; the lower story where you

send down from the living-room all the used and unneeded things.

Here the janitor and his assistants—intestines, liver and other abdominal organs—sort them out and place them where they belong.

The blood renewed by the air you have let into the upper apartment, the food teeth and stomach have mixed and moistened, are also sent down by way of the arterial and intestinal stairways making through the diaphragm or the floor separating the upper and lower apartments.

At rest the diaphragm is dome-shaped with the curve upward. In this position it of course decreases the size of the upper story. In action it works just like the sides of bellows. When you take a breath it flattens out and with a full, deep breath it curves downward. This movement further increases the chest cavity.

Here is the really important point, especially for women and for men who have built on swaying bay-windows: In the

downward push of the diaphragm the abdominal contents are forced ahead of it—down and forwards. If the muscles of the abdomen, external and internal, are in good condition and under voluntary control, they further press and massage the internal organs. This means good tone to the lower intestines and this also means avoidance of constipation. So you see that a well-developed chest action affects even remote organs.

Breathing so as to inflate the lungs to the full, is notice to the janitor and his assistants in your basement to throw out the ashes and garbage.

In exhaling the whole process is reversed. The abdominal muscles contract. In this movement they push the abdominal organs against the diaphragm. This latter muscle rises in the center, thus forcing outward the deleterious air in the lungs.

These facts show you that to breathe and be well means a lot more than simple inspiration and expiration of pure air. The

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diaphragm is the muscle to look after, for it pushes both dead matter out and draws pure, live matter into the body.

The diaphragm is the midriff of Shakespeare's time. It has always played its part in humorous descriptions of bellied men and laughing, jovial fellows. Like most parts of the human body it has had its share in drama and literature, myths and superstition. Old Melanchthon styles the laughing muscle *Generosum membrum*—a generous part. The writers of the middle ages stated that the man with small or weak midriff was sour, melancholic; the man with a generous middle muscle, jovial, gay and long-lived. If Hamlet had been put through a training of proper breathing it is probable that the melancholy Dane might have had some Falstaffian traits; big, fatty Lady Macbeth been free of her optical illusions and depressions.

The real reasons for these distinctions so well put by the old writers, is only further

proof that careful observations of men's moods show that they are governed by physiologic laws.

The merry man is a laughing man. Laughter is the best exercise for the diaphragm; spontaneous, refreshing laughter. The dour, thin-bellied and small-chested man gives his midriff no exercise through pleasing laughter. The court jesters of old, the professional laugh-maker today, may be dwarfed, mis-shapen, but he is big-chested way down to the sides of his diaphragm. His stories and antics undoubtedly saved many men and women from doctors' lancets and leeches, by forcing them to cast out and burn up waste material through hearty laughter—which means that big and strong breathing muscles were unconsciously developed.

The man without a sense of humor can never utilize his full lung power; hence his blood is always short of oxygen, tissues are underfed, and the resulting effects increase his disagreeable personality.

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I knew Mark Twain personally; saw much of him when he was in his physical prime. He often loaned his stable loft for us boys to use as a theater. When he laughed, or even talked animatedly, you could see his big midriff heave and take in large quantities of oxygen. Yet in the eyes of the ordinary observer Mr. Clemens was not a large man. But his engine power was great and this enabled him to do a tremendous amount of work at an age when most men are commencing to let up.

It has always been observed that the fat, stout man is a jolly, laughing chap. But if you carefully notice these cheerful men you will see that the stoutness is not that of over-fatness, pendent abdomens, but due to big chests and midriffs well supplied with a normal reserve of fat.

Such should be all men of middle and later life. These well-preserved men and women have power and space to breathe correctly. They laugh because oxygen—the real laughing gas—is a stimulant act-

ing upon a healthy mentality. The flabby, obtruding abdomen is due to weak and undeveloped abdominal muscles and diaphragm and small chest capacity. Individuals of this sort of physical make-up are bilious, choleric and disinclined to go beyond a smile under the most humorous conditions.

The average man or woman pays more attention to the movements of the ribs, trying to get them to rise and fall with increasing expansion, than to the development of the abdominal muscles. These muscles are really the pushing force for the human bellows. Chest exercises are quite necessary for health and longevity, but never reach their full beneficial powers unless the abdominal muscles are equally developed and kept in the best of condition.

Nowadays we are talking and reading a lot about national preparedness, but what is of paramount importance is to understand the necessity and value of body

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preparedness to keep off the enemies all around us in the air and food, and to prevent physical laziness. The danger of neglecting our defensive weapons and practice in using them, threatens many otherwise careful of habits and exercise.

“Before the curing of a strong disease,
Even in the instant of repair and health,
The fit is strongest.”—*King John*, Act II, Sc. 4.

Habits of living, clothing, constitutional and inherited affections all need understanding before explicit details of breathing can be given. Here, as in many other things, the trite saying that “what is one man’s poison is another man’s food” most aptly applies. The over-fat, the too lean, the sedentary and the physically active, each needs different modes and methods of learning how to breathe properly. The girl who works in a shop, the woman in the factory, the woman of society and the man in office or on the street, all need to know how to utilize their wasted and

neglected power for getting and keeping in perfect condition; living long and working contentedly.

There are avoidable lassitude, unnecessary headaches, sleeplessness, which can be cured by stopping the cause. Nervous instability and the craving for stimulants or drugs, infernal restlessness in the young, are many times due to the effects of wrong breathing habits. There are millions of men and women, children and adolescents who sleep while the retained poisons of the body go on injuring nerves, brain and other delicate organs. And all this in spite of the fact that they sleep with open windows, believe they have taken in fresh air during the day and observed the generally accepted rules of health.

With the increase of industrial plants in this country has come an enormous increase of occupational diseases due to the intake of gaseous and chemical irritants and poisons. These afflicted and threatened workers need careful instruction and

to be given a knowledge of preparedness and defense.

There is scarcely a disease that does not have its enemy in the blood or lymph—an enemy ready to war and overthrow the host of disease germs. But unless the roads and passes are clear and ready to the remotest organ or vessel, they cannot do their allotted work. Just because man has not kept clean and free the highways and byways in the body for his internal allies to march over when called, is the cause of disease. And these highways and byways for the host of fighting bodies to rush over only can be kept clear and free by knowing how to breathe.

CHAPTER II

THE MORNING FRESH AIR COCK- TAIL—THE NIGHTCAP—HOW TO BREATHE THEM IN

I HAVE frequently watched a trout breathe as it quietly rested in clear water. Its breathing is regular, rhythmic, without effort. He always seeks the waters flowing over pebbles or coarse sand, as if there was more oxygen in the little stirrings. Let your shadow fall upon the water and the fish is seen to disappear in just one polychromatic flash.

If you have patience—and unless you have the patience of determination, you will never learn the secrets of nature—you may see your trout return, but now breathing rapidly and deeply. His gills open wider and close quicker than before. After a few moments in his resting pool he will

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slowly move up to where there is more action in the water—air bubbles. Now he will be seen to breathe deeply, very deeply. The gills open so you can see the red of his blood. Slowly he back-paddles until he again resumes his former place and his gills commence to open and close in effortless motions.

What that trout did was to recover a normal heart-beat after a fright had caused it to jump beyond its usual rate. When he returned to his resting place he found there had been more blood pumped into his lungs than oxygen to take care of it. So he moved up to where there were more air bubbles, breathed deeply a few times, got rid of heart-stimulating stuff, then dropped down to easy and involuntary lung and heart action.

Had he been chasing his lure, jumping rapids or playing leap frog with the sun rays, he would not have been compelled to have searched for an extra amount of air. There being no fright to upset the

regular control of the breathing through the nervous system, he would have had only to rest while the lungs adjusted their rhythm.

In man as well as in animals, fright, extreme worry, shocks, affect the breathing habits temporarily or permanently.

Civilized man does not know the how or why of breathing so as to get the best out of himself. Instead of starting him right in this matter it has been left to the involuntary action of muscles and their control by the nervous system. This control will carry the ordinary individual through the average length of life as we know it, but a trained breathing apparatus will enable man or woman to add to the length of life and keep life's activity up to good and profitable working conditions.

In most matters connected with individual health forces and resources, we are less knowing or instinctive than animals. Physically we are less protected by nature than any other organism. We are

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more exposed at all points to the assaults of danger and disease. We are more liable to perish from cold, succumb to heat, die from starvation. Yet we have the intelligence when used to so clothe, eat and breathe as to give us an endurance far surpassing any animal.

We have a greater reserve force in our breathing capacity than animals, which, if properly developed, keeps the blood warm and full of those cells which are active enemies to disease germs.

As I write this the papers are full of reports of deaths from pneumonia. Prominent people, the young, the sturdy, the athletic, are dying from this germ infection. Many victims of this quick-killing infection have been those careful of their health habits, big-chested, accustomed to breathe in what they considered the correct way. But the one little thing which would have enabled them to have had the pneumonic germs killed at the start was overlooked. They did not keep the air

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passages from the nostrils to the bronchial tubes, absolutely clear and clean. This is the gateway for the germs, and being unguarded, in they swarmed to find a splendid breeding and camping place—and the bigger the chest capacity the bigger the camp.

This naturally brings us to the subject of what is fresh air under the conditions most of us have to live, and why and how to keep dirt and dust out of the external air passages.

The average individual expels every hour about twenty cubic feet of air. Remember this means that in a closed room everyone in it is throwing this amount of dead or poisoned air into it. Without any ventilation whatever, this air would have to be rebreathed and death would only be a matter of time and individual resistance. But, of course, these conditions do not prevail. We have all kinds of ventilation in houses, big buildings and shops. We try to get rid of this twenty cubic feet of air exhaled

by each person by pumping about 3,000 cubic feet of outside air into the room. With this outside air comes no end of dust and germs, microbes and other wigglers. It readily can be seen that too much of this kind of air is of little benefit if not actually dangerous, did we not possess in our air passages enemies of these intruders. Such air is always a danger to those who do not know how to keep their air passages immune to microbic invasion.

But another evil of this method of ventilation: As the outside air pours into the room it stirs up all sorts of impurities which have harmlessly settled upon the floors and puts them into circulation. Every breath we take in such a room carries some sort of dirt or germ toward the lungs. When the New England house-keeper takes her broom and other frightening tools to give the house its semi-annual stirring up and cleaning out, including her husband, she starts the germs and foul dust circulating. No wonder that she and her

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children have their Spring colds, catarrh, "bad coughs" and pneumonia. I suppose this sort of house cleaning and dusting is necessary, but it should be done when all the members of the household can be away and stay away for several days—until the germs and dust left have been allowed to again settle. A dust mask always should be worn by those who are in the midst of swirling germs.

According to Dr. C. F. Bennet, a noted ventilating engineer, the air everywhere contains quantities of dust and infective material. Even in mid-ocean, when the air is at its best, there are six microbes to every cubic foot, and in New York probably 80,000 to every foot.

All this interests us in our subject of correct breathing because it shows we cannot avoid the presence or even the breathing in of microbes. It also brings comfort to those who have been under the impression that it was impossible for persons living in city rooms or working in shops to

derive health and secure immunity by any method of breathing. It would appear at the first thought that the less force one put into breathing the less chance of taking in dust and germs. There is no man or woman living who does not daily breathe in disease germs. The germs of consumption, of pneumonia, for example, are ever floating about. Those who escape are many—the great majority. But there comes a time when the strongest are infected. There is only one way to avoid this fatal time: keeping the air passages clear and clean and never leaving over in the lungs any unburnt material. Of course all these statements presume a careful observance of the general rules of health in other matters.

There are peoples who live so near to nature that they are perforce living examples of what breathing fresh air will do for man. Those who have read Gogol's "Taras Bulba," which is really "one tremendous shout of joy," will realize the

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tremendous power given to all men who live in the wild spaces—that is, in the open. Immense vitality is what Gogol shows in those men who are ever breathing air saturated with oxygen. The American Indian's vitality and endurance were wonderful.

When Russia needed men of endurance it was the open-air breathing Cossack she called to her aid. No matter about their other traits, even if you do believe all newspaper accounts. I do not believe them all because I know the Cossack. What we must consider is the utilitarian ends they accomplished for Russia.

Wildness is only harmful when it is licensed. Governed wildness is power. You cannot get this wildness or vitality from vitiated air.

Several fresh-air cocktails should be taken every morning before dressing. One of the most important things to do to make ready for the morning drink of oxygen, and one generally overlooked, is to un-

twist the internal arteries and veins and stretch the capillaries. These latter are the very fine endings of blood-vessels: a meshwork of such thin and tiny tubes that the blood in them can pass growing material through their walls and take up dead stuff from the surrounding tissues.

When you are fully awake, stretch your arms above your head. Stretch until you feel or hear the joints and tendons are tense. You may hear a sort of snap in shoulder or elbow, especially if you are one of the kind who have been accustomed to get out of bed with a slide and lazily shove yourself into your clothes with a sigh and a slump.

After a tense stretch of the arms and shoulders stretch both legs. Push them out together at first and twist them upon themselves. Then extend as far as possible, until you actually feel it lengthen, one leg at a time. Do this four or five times. Now get out of bed slowly. Never jump out of bed or get up with a sudden start.

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Sometimes in strange places you might find this advice impossible to follow, but under those conditions you will not have remained long enough to have the rapid change from recumbency to a stretching position do any harm.

To suddenly get out of bed after a night's sleep is too much of a shock to the heart and nervous system, which, like any piece of machinery, must be started slowly and with some warning of the work to be done.

Many headaches, sometimes palpitation of the heart, cold feet throughout the day, indigestion after breakfast, are due to this sudden starting and jolting of the human machine. This especially applies to those of nervous temperaments and the sedentary person, the over-fat and tippler.

To get the full benefit of the real and only natural start for the day after a night's rest of all the organs, you should stand naked with the feet on some warm stuff — not necessarily warmed. Then

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stretch the arms straight above the head and try to pull the whole body upwards in such a manner as to stretch the spinal column. You want to try to pull on the hips by reaching upward with extended arms. Sway a little on the hips as though loosening them a bit. Then pull slightly on one side, then on the other, finishing by a straight extension upwards.

It can be done with ease after a little practice. You have seen a dog, upon rising, do about the same thing; pull and stretch every leg, then neck, bend his body with curve downward then upward, turn his head around and give his tail a pull? He will do this every time after a snooze and before he will even chase a convenient cat. He starts right, and this is the cause of his gracefulness and activity, unless he has contracted the habits of a fatty and lazy mistress.

If you are measured in height before this spinal extension and measured after, you will find your height increased from a

quarter to half an inch. In certain cases, especially in the man not over forty, this may be increased.

You see that during the day the vertebrae have settled down upon the little mats which separate them—one between each spinal bone. While you are sleeping their elasticity has been restored but the pressure of the day before not altogether relieved. These spinal mats are far and away superior to rubber heels in relieving the spine and head from the constant shocks and jolts received in walking. In fact that is just what they are for. There are many of them and they will not wear out if you know how to care for them. By the method I am advising their resiliency may be renewed each day. Then you may retain that “springy walk” evidential of health.

A few weeks’ practice of this spine stretching will give you the actual ability to start every morning with a spinal column free from any left-over pressure, its

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capillaries freshly ready to receive the oxygenated blood you are to send them, and retards the shortening of the height which accompanies age. Many tender and lame backs are due to pressure on these little spinal mats. The exercise outlined will very often relieve this painful condition.

With this spine exercise goes also the stretching of abdominal organs and abdominal muscles. Also the legs, for we have not yet done with them.

Bend each leg upon itself until the heel strikes the buttock. Do this several times. Then, alternately, bring up each leg so it straightens out at right angles to the body. While in this position work each toe, bending it backward and pulling it forward. Or rather try to do this, which is a different thing altogether as you will discover. You will derive some amusement in attempting to get voluntary control over each toe muscle; also you will learn a few important facts about real health. You

will realize how far backward or forward, as you like, you have gone from your arboreal ancestors who could use their toes as readily as they used their fingers. It is really one of the arts we should have retained for perfect health. Because, if you want a perfect circulation all over the body, if you desire feet free from corns and pain, pretty pink toes, you must get this control over each toe.

In a natural state man's toes should be as much under voluntary muscular control as his fingers.

The toes are under voluntary control by men of all races which have not in some manner paralyzed or caused them to atrophy—shrink—as we have. The Chinese custom of binding the feet of females is one extreme of toe distortion and paralysis. Our tight shoes and the confining of our children's feet in stiff footwear instead of permitting them to run barefoot, is a halfway method of causing distortion. The Japanese—you have watched their jugglers

and pole-climbers—have complete control over their feet and toe muscles. It is stated by reliable observers that the three great factors which made the Japanese army so formidable, were the freedom from foot sores and foot fatigue, and absence of alcohol.

But we are doing better in the matter of feet distortion. Styles in footwear are changing so as to give more freedom to the toes. Dancing and skating are going to develop these freed toes and their tiny muscles.

The best way to get voluntary control over the toe muscles is to work all the toes at once until there is developed a group control. Then by mental concentration, determination and knowledge of the necessity of individual control, you can accomplish it.

But what has all this to do with breathing? Everything! There is no use learning to breathe correctly unless every organ is in the best condition to profit by your

full intake of oxygen or unless the last inch in your body is in such a state that it can readily cast off every particle of dead material.

And right here is where so many errors and failures occur in the various advised methods of "deep breathing." It has been generally overlooked that the building and renewing effects of oxygen can reach only those parts made ready for them. If there is any part of the body that is not constantly ready, no methods of breathing exercises can possibly affect it. Hence you may go on enlarging your chest, obtaining greater breathing capacity and general power, yet find in the end there is some organ or muscle still remaining inactive or dying for want of good blood nourishment.

Let me illustrate. In Massachusetts we have some rather severe weather in the winters. To heat an old New England tavern turned into a house of modern conveniences, requires a formidable heating

plant. From the furnace in my house to the harness-room is a distance of about one hundred and fifty feet. When the furnace fire was started this winter all—as we believed—of the radiators, and there are fifteen or more, gave out their allotted amount of heat. The hot water circulated from kitchen to attic, from study to laboratory. But it was discovered in time that the radiator in the harness-room was cold-dead. There was no circulation in that radiator—the toes of the system. It meant harm to the rest of the circulatory apparatus. So we investigated. The toes of the whole heating system were constricted—clogged completely.

The furnace was taking in oxygen and burning fuel, giving us the comfort of its energy, but its breathing was of no value to the toe radiator. When we started the circulation in that toe by cleaning out its arteries and veins—the inflow and the out-flow pipes—it received the full benefit of the breathing furnace and horses and dogs

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were made comfortable. But more than that; we saved the whole system from being injured.

So must you see that all the little pipes in your extremities are open to receive the flow and return of warm blood.

To go back to our stretching and body pulling. You are now ready for the morning fresh air cocktail. Every vein, artery, capillary, is in a condition to receive and digest blood, just as your stomach will be to receive and care for food.

Assuming you have slept with window open, had no gas or lamplight to eat up oxygen, you should face the open air space and empty your lungs.

Snort it out. Clear and clean the nostrils of all accumulations of the night by forceful snortings. I like that word to express my idea better than the one used by the French doctors—*s'égosiller*. Now take a partial inhalation; hold it for twenty seconds, imagine yourself an exhaust pipe of a motor and blow outwardly.

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With head held up so as to extend the neck, shoulders back, arms at side, gradually commence to breathe deeply and slowly. Fill your lungs until you feel "you'd bust," then let them empty themselves slowly and without force. Then, fifteen, twenty times repeat this exercise and you will find the feeling of blood circulating from temples to toes beats that of the noxious alcoholic cocktail and will drive away a headache quicker and keep it away by the correct action of healthful blood upon the brain cells.

Now take your cold plunge or shower, tepid sponge or spray, get into seasonable clothing and your body machine is fit to do the day's work without injury to any of its parts and well supplied with lubricating material and pure fuel.

Advice and rules regarding the fresh air nightcap really belong to the details dealing with vocations and the day's work. Many men and women are advised to exercise before retiring for the night. Most

persons today need rest and not mental or physical exertion after the strains of their day's efforts.

But, as a general rule, we may place as the primary requisite the habit of cleaning out the air passages; of getting rid of all the accumulated dust and microbes which have found a warm and moist resting place where, if given time, they will start something.

The mouth, the teeth, the nostrils, the nose passages, all need nightly attention. Never use salt solutions nor any chemical solution to wash out these air canals. Just plain water, neither hot nor cold.

For your nightcap expel all the air possible from your lungs. Pay more attention to exhaling than to inhaling. The latter movement will take care of itself. The air seldom has any trouble in getting in, but the by-products of combustion do not so readily get out without a little effort on your part—this is especially true at night when there is lessened nervous power.

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By practice you can make a very serviceable vacuum cleaner of your mouth and nostrils, the power coming from chest and abdominal muscles, the development and use of which I shall explain further on.

CHAPTER III

THE LITTLE THINGS THAT PREVENT PROPER BREATHING

THERE is no more justification for having catarrh than for having habitual cold feet. However, a man chronically weakened by an avoidable catarrh has some excuse for having "cold feet" and letting the yellow streak in him be demonstrated.

Catarrh is not due to any climatic conditions nor to "catching cold." It is a germ infection scattered by unclean mucous membranes which spray the microbes by the sneezing, coughing, expectorating carrier.

You jump away with alacrity when you hear the sound of a rattlesnake because you know what its warning means. You should know that the sneezing, hawking, spitting of a human being means he is throwing

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some form of venom into the air for you to breathe in. We cannot at present entirely prevent this menacing state of affairs, but we can learn how to protect our air passages from harboring the venom.

I repeat: Catarrh is not due to bad air in the ordinary meaning of this term. This brings us to the question: Just what is "good air"? What is "fresh air"?

It is not necessarily outdoor air. It is air which is in motion, dry and cool. Fresh air and cold air are not identical. There are certain conditions of the respiratory tract in which cold air is injurious. It acts upon inflamed tissues as an irritant, while fresh air warmed and in motion soothes and heals. It can be set down as a rule that fresh air is a healing and repairing factor in all throat and nose troubles.

There is no such condition as "pure air," if by that term is meant air which does not contain bacteria or dust. Fresh air always contains bacteria and dust.

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Such air is not injurious to anyone whose breathing exits and entrances, tubes and pipes are in a healthy condition—free from inflammation and irritating substances.

Everyone feels better in fresh or outdoor air; so does an invalid or depressed person; hence fresh air—air that is cool, cold and moving—should be the kind of air getting to the lungs.

The bracing, cold air of the winter, of the mountains, of the snow-covered hills, is always beneficial. But there is a cold air state to be avoided. This is the still, stagnant air remaining in unventilated and unheated rooms. This state of affairs is mostly found in those country homes where guest chamber or parlor is opened only for a funeral or the unexpected arrival of the "City cousin." This cold, but STALE air is often found in warerooms and cellars. While I am writing this I have been called to see a sturdy, outdoor man down with a severe chill and a very bad cough. No amount of cold air—the outdoor of the

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woods and fields—has any but the best effect upon him. But yesterday he went into his cellar and spent the day sorting vegetables. The temperature of the cellar air was not so low as that of the outside air; but it was stale, unmoving and unmoved. It at first irritated the mucous membranes of his breathing machine and the cold air passing over this inflamed area resulted in disturbing the skin action, which regulates the body temperature, and he is in for a period of severe illness.

Had he opened the cellar windows and door for a few hours before going there, no amount of the outdoor air would have affected him.

Remember that cold air which is stirring cannot injure or affect anyone—it is always beneficial. Under ordinary conditions it cannot have any action on the healthy and clean mucous membrane of the respiratory tract below the trachea or largest bronchi, because it will be warmed before it reaches it.

There is no necessity of worrying about

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mechanical ventilation and other schemes to warm and circulate the air in bedrooms. A window opened at the top about half-way will give proper ventilation and the air of the room warm it enough.

The disagreeable nasal tones, voices which sound as though passed over a steel rasp and the strident sibilations typical of New England people, have come to be considered a national trait. The snuffling, sniffing nose belonging to so many New England people and their descendants, is almost as disagreeable and disgusting as that of the snuff-takers in the Georgia and Carolina mountains. It is impossible for persons afflicted with these mucous running noses to ever breathe so as to be well.

A generation or two ago it was a common experience to see in the homes of New England and the Middle West some sort of an arrangement for inhaling the fumes of heated tar, salt solutions, spray- or nose-douching apparatus as supposed remedies for inflamed air passages. Tin

pans containing patent medicine cures or Grandmother's Catarrh Remedy were covered by the kitchen funnel, placed upside down, and each member of the family from the baby to grandfather would take turns fastening their inflamed nostrils to the small end of the funnel. Later came the cursed cocaine powders as a catarrh cure, and the evil effects of this brain and morality destroyer are still with us.

Superheated, irritated, nose and throat would be wrapped in rolls of knit scarves or mufflers—a good name that, for these breathing preventives—and the victims go out into the chilling rain or sleet. The nostrils were left partly free; just enough for the half-expired air to freeze on the muffler so that every intake of air passed over a miniature frozen waterfall, grabbed all grippe and pneumonia germs in the surrounding air, and these were sneezed or coughed into the lungs of others.

This bundling of nose and covering of throat caused the mucous membranes of

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throat and nose to become an active bed for disease germs. The protective cells were deadened, dried up in the nose or else rested in the bronchial tubes and the innocent climate blamed for the catarrhal state of the New Englanders.

It was, and is now, individual protection absolutely neglected through ignorance of the methods of body preparation, which causes epidemics of grippe, influenza, pneumonia and catarrh.

The injurious effects of not knowing how to breathe correctly have left anatomical obstructions in nose and throat which prevent any efficient breathing in these individuals. All these conditions can be rectified and, in children, prevented.

Now let me repeat: All defects in the air passages, as well as the unphysiologic conditions arising from them, must be corrected before one can breathe and be well.

Starting from the nostrils we find at the upper end of the internal nose, adenoids or

little wart-like growths. These generally are the effects of neglected "colds in the head" in the infant or child plus the irritating methods of treating them.

Further back is the uvula or soft palate—that little tassel of flesh which so often tickles the roof of your mouth or slaps the tonsils. This soft palate, as you know, can be seen by looking down the mouth. It may be too long, and dropping down back of the hard palate causes an irritation which gives you that little hacking, coughing attempt to clear the throat which, of course, only adds to the trouble.

The ordinary elongation of this tickler in the adult, due to too cold air reaching it or to being overworked and over-douched by a night's "good time," will shrink or return to its normal size if left alone. But not if it is constantly irritated, for then it loses its tone and will hang as a very annoying block to any and all attempts to breathe correctly—or rather any attempt to get the full benefit of breathing properly.

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This soft palate is a hang-over from the time we had to breathe through gills—when we were pollywogs or some other kind of water wigglers. At present it is of use to us as a push-button warning us of some inflammation in or around the air passages—inflammation of the pharynx for example. Every time such a condition exists the palate buzzes, producing a peculiar, insistent throat cough: a “front, there!” call.

Then there are those much-abused tonsils; the armored and armed guardians of the throat. They have been cut, slashed, and not infrequently poured out life’s blood—for they can do that. They have been burnt, seared by hot irons, scarred by caustics and cautery or else driven to pus-making, through injurious gargles and washes. But happily peace has been declared and the sanguineous war against the innocent tonsil is now a matter of recent medical history.

Man’s best guide and protector to him

who breathes right, the tonsils, have been tortured and denied and many throats to-day lack protection from the germs of air-born diseases.

Unless the tonsils are intact, clean and healthy, you never can breathe correctly and effectively.

Here is the point: By letting them alone, washing them only with plain water, the habit of proper breathing will keep them in a healthy state. Then they will watch and guard the throat's intake, for the tonsils manufacture material which pours out enemies to the germs of grippe, pneumonia and other air-born microbes.

When palate, nose or tonsils are affected in any way they cause that disagreeable and injurious method of getting air into the lungs—mouth-breathing. No matter how careful you are to avoid those things and habits you know to be harmful to health, if you breathe through your mouth it is only a matter of time when you are down with some sort of "bad cold," and a

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bad cold may be the forerunner of a deadly affection.

The mouth was not intended to take in air. It has enough to do without taking on extra and uncongenial duties. One could eat through the nose with just as much reason as breathe through the mouth. Only as a reserve entrance and exit in extreme efforts of respiration and emergencies should the mouth be used for breathing. The lining of the nose and air passages is protected by a membrane which warms and filters the air—the mouth is not so lined. This is the reason lips and mouth become dry and crack when you breathe through them. In a healthy state the nose and other air passages prevent living germs, such as those of grippe, from becoming active; the mouth never. If you breathe through your mouth ever so slightly while in a crowded hall, theater, trolley, subway or anywhere people are throwing off disease germs, you run a risk of getting into some serious bodily trouble.

If your true breathing tubes are not absolutely clean and in a healthy state there is also serious danger.

Children, taken among all sorts and kinds of people or among other children, are always in danger if there is the slightest nose obstruction or if they have the habit of breathing through the mouth.

Adenoids are the principal obstruction found in children's air passages. If your child sleeps with its mouth open, if it snuffles, if it sometimes becomes expressionless, take it to your doctor or to a specialist. There is no excuse or sympathy for the mother who lets her child grow up with health-destroying adenoids. Expense is no excuse, because the adenoids will be removed in a few moments at any hospital. The little operation is free from all danger and will be done without cost for those unable to pay.

Faulty breathing has been the real cause of many deaths in children, although the

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trouble has been given another name or names.

Never use a hairpin or any harsh instrument in trying to clean the baby's or child's nose. A soft cloth dipped in warm water is all that is needed. Again, let me emphasize, repeat, for all mothers, everybody, never use salt solutions in nose or throat.

No child or adult ever recovered from the grippe or pneumonia who did not live with some of their after-effects—generally nervous troubles. So do not let yourself or your child ever be in such a condition that the germs of these destructive diseases can set up a lively colony in its body or yours. You cannot avoid these germs, but you can make your body and your child's immune to them.

No child that is allowed to continue the mouth-breathing habit ever can develop its latent powers. A youth or girl who breathes through the mouth never can obtain that health which means immunity to disease.

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Breathing through the mouth means, for the baby, a dried and ever parched mouth. This irritates and prevents it from properly nursing or taking the bottle. It alters the shape of the mouth, twists it all awry, changes the expression of the face as it grows and forces teeth out of alignment. Many girls have to go to the dentist because, as babies, they were allowed to lie on their backs and with open mouths try to take in and expel air intended to go through passages made for this express purpose. Many boys, of course, are in the same need of dental attention, but cosmetic appeals do not affect them. But put it on a big chest appeal basis and they will readily endure the imaginary tortures of the dentist's chair.

Your child will not have adenoids if it is started right in breathing habits. If necessary put a little piece of surgeon's plaster over the tiny lips, but stay always by the child. Mother's love and care will do all this and more when she knows the necessity and reason. While holding the

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baby if it WILL keep its mouth open, place your gentle hand over the lips. Pinch the nostrils very gently for a moment until you feel a tiny pressure, then relieve at once. The child will give a little snort. These methods will soon teach it to use the nose and then it will commence to breathe right.

The child should rest so there will be no bend or curve of the neck. That is, the breathing pipes should have no stretching or bending.

Unless the teeth in the young and adult are regular—that is unless the jaws come together so that upper and lower teeth meet in perfect alignment, such persons cannot be taught successfully the methods of right breathing. The teeth must be the first thing to correct after being assured that the nose is clear of all obstructions.

No matter if there is occasional throat irritation, sometimes a soreness and enlarged tonsils, in the young person. In the adolescent almost always there will be

temporary enlargement—blood engorgement—of the tonsils. A few weeks of proper breathing will correct these conditions. This is one of the remarkable results of knowing how to breathe right—nature corrects these temporary faults just as soon as you give her the opportunity.

To form the habit of correct breathing so that from conscious effort it becomes a natural and unconscious act, requires patience, practice and posture.

As I shall have something to say about clothes and the way to wear them it is only necessary to mention here the importance of freedom for the neck and its vital blood-vessels and nerves.

Do not wear tight neckwear if you want to get the benefit of right breathing. Have no pressure upon or around the neck if you want to think to the best of your ability. The ability to think depends upon the amount and quality of blood circulating in the brain. Any pressure on the vessels coming and going to the brain affects the amount

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and strength of the blood stream. It also affects the quality of the blood because it cannot receive the benefits of breathing to the full. And these conditions working together, of course, react upon the nervous system. If your nervous system is impaired you never can learn to breathe right.

Do not muffle your throat. Give it air. Let the breezes blow around it. If you are a girl or woman and must wear furs in mild or warm weather, put them around the ankle. Anyway, they will be more noticeable there. Put something warm around the ankles and upon the feet, but don't bake the warm blood trying to get to the brain. When I see bare or thinly-clad ankles trying to keep from being dislocated while held up by distorting high heels, inches deep in snow or slush, I wonder if the pressed and muffled arterial flow really could injure the brain of the woman. I wonder! And so do all intelligent men and women.

You cannot do these fashionable stunts

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and derive any material benefit from the following instructions of how to get pure air into the lungs and tissues.

Head up, shoulders back while walking or sitting, is the first thing to keep ever on your mind. If you have started your spinal column right in the morning, this attitude will be adopted naturally after a little practice. The air passages having been cleaned for the day, take deep inhalations wherever and whenever possible. Do this for a few moments before luncheon or dinner in air that is moving. Do it before climbing stairways, but not while climbing.

Fill your lungs, hold your breath for a moment, then expel the air. You should do this until you feel that the collar-bone has been moving, the lower ribs make you know they are all there.

These exercises are for any time you have the moment's opportunity and the fresh air. Not necessarily out of doors, anywhere there is absence of crowds and air from outside gets in. I knew a young

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man employed by a packing house who used to have a few spare moments in the cold storage room. He thought the air there was fresh—it was. He exercised to enlarge his chest. He kept up the exercises in this cold storage room for several weeks. Now he is in cold storage for good.

After a few weeks' practice the nerve centers which control the muscular movements of breathing "get the habit." When this point is reached you will feel at intervals a half-conscious impulse to fill your lungs. There comes a feeling of air hunger and you satisfy it. As this state is approached you may start the real development of chest and a shapely and useful abdomen. We shall see how, later on.

When walking, clasp your hands behind your back, bringing the shoulders taut. No deep breathing now; just brisk walking, breathing naturally; that is without effort. In this position of arms and shoulders any heaving motion of chest and

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abdomen is liable to overstretch or strain chest muscles—a condition to avoid.

When you are in a crowded place, breathe lightly; do not try any lung expansion is what I mean. Wait until you get out in the open. Always walk in the open air after being in crowded places. I realize that this advice sounds rather ridiculous to those who attend theaters and many social functions; but it is the principle I want to show—the reason.

You must find some way as soon as convenient to snort out, or, in the case of our gentle companions, to consciously exhale the by-products of the dust and emanations you have partly inhaled. Do it as soon as you reach your sleeping-room and have bodily freedom. Remember that it is of great importance, this getting out of your lungs the effects of the air you have been taking in. I purposely harp upon this fact because it is the basis for obtaining self-protection from the germs always around us.

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If you have been traveling in railway coaches you should, as soon as possible, clean the nose and upper air passages with warm water—nothing else. After this necessary hygienic procedure breathe fresh air according to the instructions given above. If it has been a night in the sleeper the same rules apply, only they must be more rigidly followed.

You never know just what kind of germs or in what quantity you have taken into the air passages, and the only safe way is to clear them out and replace them by their mortal enemy: fresh air passing over all the mucous surfaces and getting into the furthestmost lung cell. It really amounts to house cleaning. Each lung cell is a separate room where possibly lodges poisonous material for your blood to absorb unless the rooms are swept clean to the smallest corner.

You cannot get the full benefit of golf or other general outdoor sport unless you have started every rib hinge, spine joint,

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lung cell, by a few moments of deep breathing before the game. This done, every little physical effort and slight exertion in the open is multiplied in its effect by the receptive state of organs and vessels. Especially valuable is this method to those of sluggish livers or lazy kidneys.

CHAPTER IV

SNORING—THE CAUSES AND CURES

SNORING is due to some interference with the air passages. It is frequently caused by day breathing through the mouth. Breathing through the mouth causes evaporation from the mucous membrane. This means a dry mouth and during the night the wind whistles over this dry surface, which acts as a sounding-board.

Snoring may be due to neglected adenoids from childhood, the effects of a chronic catarrh, which remains quiescent during the active hours or one which has been treated by chemicals and drugs, too much dinner or too many drinks plus a low tone of the nervous control over breathing muscles.

Of course the snorer does not breathe

right while sleeping or during his conscious hours. There are those who whistle like ships which pass in the night, whose air passages during the day are unobstructed and unaffected in any way. But they do not breathe in the right way during the day, and this faulty breathing has so irritated the mucous membranes that throughout the night they pour out a mucilaginous material over and through which the expiring air has to make its noisy way.

Snoring is always a sign that the individual is wasting energy; that the life-prolonging oxygen neither gets in nor out without some kind of obstruction or without being mixed with mucous and deleterious moistures.

Snoring is a sound picture of the snorer's life; his early neglect, bad air throughout the day, over-indulgence in eating and drinking, the body's struggle to recuperate under difficulties, are some of the secrets told by the sounds.

Some philosopher has said: "Let me

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know what a man eats and I will tell you what he is." Let me hear an adult snore and I will tell you what that person has been, is and will be; for out of the mouths of snorers gurgles the truth.

Clown—"that such a one, and such a one, were past cure of the things you wot of, unless they keep a very good diet."—*Measure for Measure*.

The vigorous snorer is dangerous because he is a veritable fountain of a germ-scatterer. He is a human sprayer of microbes held in vaporous solutions which are being blown into the surrounding atmosphere. Constantly, rhythmically, during the hours of night the poisonous jets jeopardize the health of all near him. When a man sneezes or coughs near you you can get away, blow your nose, then exhale through it and follow it up by an exhalation through the mouth—but only once or twice through the mouth.

But think of sleeping in the same car, house or stateroom with one of these human

nightly poison sprayers! Because we have been in the habit of doing all these unhygienic things is the cause for the rapidity of the spread of grippe, pneumonia and other dangerous diseases which find entrance to the body through the air passages. In the times past it used to take months for an epidemic of influenza to travel. Now with our facilities for rapid traveling the germs are up-to-date and follow as do mail and spraying travelers.

All dangers have their warnings. When the snorer starts in for his night's work get away from his presence at once—far away. Go to the smoking-room if traveling on land or water. If you are of the sort or sex which do not smoke get into the fresh air somehow. If in hotel or house demand a room far from the fountain's spray; then close the transom and open the window.

The deep, booming snore is a warning to the snorer and his friends that all is

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not quite right with him—or her—if it is a stout individual.

This kind of snoring is a possible fore-runner of apoplexy, heart trouble, hardening arteries, kidney congestion. Sometimes such a snoring as these stout individuals render can be scarcely distinguished from the stertorous breathing in apoplectic attacks. It so closely simulates the latter that it shows a congested state of blood-vessels.

And right here, before it slips my mind, I want to say to all mothers, that frequently snoring in children is due to constipation, this latter condition producing a congested state of the blood-vessels.

The mistake is too often made of believing that because a child is regular in its habits of bowel evacuation, it is never constipated. In spite of what you think is a cleared-out lower bowel, there may remain hidden and packed in its many folds, material which causes a slight irritation and congestion. If the child WILL

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breathe through the mouth while sleeping it is always well to look to this bowel matter.

Now, if you have taught and watched the child to breathe right; if it sleeps in a room where fresh air constantly circulates, the oxygenated blood will reach the lower bowel and keep it free. Do not let the child hurry through the breathing exercises; that is, breathe rapidly as they are wont to do in order to finish and get away. Patience and watching that the breathing is deep and SLOW is the way to start the child right.

If your boy is inclined to snore lightly you may be certain that he partly breathes through his mouth during the daytime, especially after physical exercise and hearty play. After a long run or any period of violent exertion, it is natural for man to assist the lungs and heart by taking air through the mouth as an adjunct to the nasal pass. But such a practice should last only for a few minutes. If the boy cannot

keep his mind upon this fact then teach him to keep his hand over his mouth each time until the habit of tightly closing it becomes an involuntary habit.

Let the boy see how much greater his chest heaves and enlarges, how the ribs stand out when he breathes only through his nose, and he will at once adopt a proper breathing method. All boys are from Missouri—they want to be shown.

In a girl, over-play, undue excitement affecting the nervous organization, cause relaxation of the palate and disturbances of the tonsils. In this condition when she sleeps, there is temporary obstruction of the intake and outgo of air and the fizzle snore is the result.

In the majority of cases the habit of snoring is due to sleeping on the back. In this unnatural sleeping position the soft palate, tongue, tonsils, relaxed and fatigued, slip down and backward. The lower jaw naturally drops, leaving a partially or completely open mouth. Also the

head is thrown somewhat back, stretching the neck and jaw muscles, which aids in keeping the jaws apart. All these unnatural conditions add to whatever other obstacles exist: adenoids, dry mouth, cindered and dusted nostrils.

Did you ever see a dog sleep lying straight upon its back, neck out, head back? Did you ever see a horse, cow, hen, frog; any animal, sleep on its back? If you find your canary, in the morning, lying on its back, you know he is no more a singing canary. Turn a turtle upon its back and see it try to breathe through its mouth; about the only way it can breathe in that position and not very successfully then. Hypnotize a fowl and place it upon its back and watch it gasp for air.

No animal, except man, sleeps upon its back. And no man but the feather-bed man even attempts it. During the period the young and the adolescent are acquiring this bad habit, nature warns them by the dreams she sends; night terrors in the very

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young, weakening dreams in the youth, and when the grown will not learn better, by snoring nightmares.

No animal ever sleeps upon its back except in its last sleep. Coil up or else sleep upon your side. Get back to nature; don't put nature upon her back.

Assuming you have attended to the health and purity of all the air passages, the next thing to do is to stop the habit of sleeping on the back if you wish to cure yourself of snoring. There are various methods you may use. One of the best is to sleep upon a hard mattress. It is natural for one to take a position on one's back when the body sinks into a soft and deep nest, whose sides rise, preventing easy turning or rolling during the night. The instinct to roll over several times during the night is nature's way of having you do some breathing through the skin.

Next to accustoming yourself to sleep upon a hard mattress, the best way to stop sleeping on the back is to tie a knotted

towel around your waist. Tie the towel so that the knot comes directly in the small of the back. Then start in sleeping upon the right side. If you get to sleep and turn over on to your back the knot will call your attention to the fact. I knew a man who tried this method of breaking his back habit, but it was too fixed in his nature. The knot did not trouble him so he used a chestnut burr in its place. It did the trick. However, I do not recommend this method as a rule. In some of the old moss-back snorers it might be efficacious as well as forceps upon the lips.

In most cases breaking this back-sleeping habit will also correct the mouth-breathing habit. But in rebellious cases other means should be taken. Fasten over the mouth one or two slips of surgeon's plaster and stick to it; or better still let the plaster stick to it.

The personal equation in mouth-breathing is of great importance. No matter how

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well developed your chest capacity, how well you have opened the lower lung cells by breathing exercises during the day, you never can procure and secure complete health if you breathe through your mouth during the night.

Make it your paramount thought and action to keep your mouth tightly closed breathing involuntarily or voluntarily. There is a lot of will power and memory to be used here, but you can by constant practice so drill the muscles and nerve impulses that jaw and lips will tighten instead of loosening under all kinds of breathing efforts.

But, of course, the real secret is in starting the child right in all these matters. It is not at all a difficult matter unless you consider watchfulness, patience and knowledge of your child a difficult matter.

Many children, especially boys, acquire the mouth-breathing habit through swimming. Let boys and girls get all that is possible out of this most beneficial sport

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and exercise, but teach and admonish them that their chest development only can be of value when the air for the lungs passes in through the nostrils.

The adults of both sexes can stop the mouth-breathing habit by remembering these statements while bathing or swimming. It is somewhat amusing to notice how many people unconsciously breathe through the mouth. Many, most of these would resent any such charge, but watch a friend after a short run for the car, a hurried rush up the steps, after an excited argument or while watching some interesting scene at the theater. Eight out of ten will be found taking in some air through the mouth passages.

No wonder colds, catarrh, grippe, pneumonia, headaches and other microbic diseases are always menacing us. Yet to one who rigorously obeys the way we were intended to breathe and eat, these infections have no terror.

Lately there has been an odd sort of

mouth-breathing to be seen every day upon the dusty and dirty roads; one which will have injurious effects upon its victims unless it is stopped.

I refer to the mouth-breathing of the ardent motorist; the man or woman developing incipient "speed mania." I have seen the steering-wheel grasped by young people who sat rigid, tense, open-eyed and open-mouthed as they motored to the speed danger point.

Such an attitude of strain is natural under these conditions—a psychologic state produced by kinetic forces. It belongs to the mechanistic make-up of man. It is the same psychic state caused by a new, startling sight or sound. "She stood staring, opened-mouthed," says the near novelist.

So see to it that your mouth does not take in sight, sound or air. You have eyes for the sight, ears for the sound, nose for the air, but the mouth is for the entrance of food, the lips in a pretty girl— Well,

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sometimes for closing negative decisions, sometimes for loving welcome.

But she who motors with open mouth never will have moist and sweet lips to be kissed.

Even if the teeth are in splendid condition—a rare state to find among men and boys—the intake of air passing over them is liable to carry deleterious substances to the throat and lungs. A form of catarrh is due to this fact. Not all disagreeable breaths come from unclean teeth and diseased gums. Many come from a throat lining encysted by decaying matter brought there by mouth-breathing.

Overfat faces, pendent jaw flesh, heavy, dragging - down chins, make mouth-breathers.

But the remedy for these cases implies methods which will reduce the whole body flesh and will be considered under another chapter.

CHAPTER V

BREATHING FOR BEAUTY— BREATHING AND EATING

RED cheeks, plump and rounding curves, symmetry, vitality and nervous poise are states and conditions made and held from what goes on **INSIDE** the body. Nothing is true, lasting or beneficial to the body or its beauty, to strength or health, that is externally applied, except water.

This means electric massage, the pounding of vibrators, flesh foods, "bust enlargers," hair restorers, complexion wafers or washes, fat eliminators and "nerve foods." Electric massage and vibrations have their places in certain forms of undevelopment in the over-fat and those persons whose initiative and will-power have to have some form of external assistance.

All the other artificial methods men-

tioned and those not mentioned are beauty destroyers, deceivers—things to be absolutely avoided. The reason is simple to understand. There can take place no development of any organ without that organ getting a good supply of blood which is rich in oxygen. You can enlarge a muscle by massage or vibrations. True, this sort of manipulation or mechanical exercise sends blood to the organ or muscle, but that blood is not rich in oxygen because there goes no deep or extra breathing with the operations.

You may eat according to some fad rules, fast under ancient or modern regulations, diet or stuff, eat nuts or chew red beef, drink hot water in the morning, take internal baths at night, and if you are not injured by one or more of these foolish fads, certainly never will derive any benefit. Internal baths are as necessary as external, only they should be the real internal; that is the abdominal muscles should squeeze and flush out the internal organs,

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using the fluids and soap of the intestines for this purpose. And as we shall see, in doing this you are forced to take in a lot of oxygen.

There are no such real things as "Flesh foods," "Complexion foods" and the many other claims of advertisers to sell you beauty and health. Beauty and health are not purchasable articles. They are procurable conditions the ingredients of which are manufactured in your own body, and there are no patents registered for their production. They might be called proprietary products in so far as they belong to your body exclusively.

Don't be fooled by believing that you can get beauty and health by anything you can put on or in the body—anything which comes in a bottle or box.

The reason is that only the blood and its many assistants, lymph, pancreas, spleen, etc., can prepare food so that its various separated ingredients go to the spot or

spots where they are needed. The blood cannot do this delicate chemical work unless it first gets its oxygen from the intake tubes and can pick up and throw off all the waste stuff.

And this means always, always, proper breathing. Furthermore, you cannot attain this state unless the diaphragm is fully developed and under voluntary control.

The young woman needs to follow, and to follow carefully, the instructions now to be given, if she wishes to become more beautiful, to turn a commonplace appearance into an attractive one and maintain beauty and attractiveness for many years—for all her years up to seventy. Oh, yes, it can be and is done by those who know how.

Having started to develop the chest and strengthen the spine according to instructions given in a previous chapter, you must now start to strengthen the diaphragm. With many women this is a somewhat difficult matter to bring about because it neces-

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sitates rigid adherence to freedom from all pressure upon the body at certain intervals.

No waistbands; nothing on the body except what rests upon the shoulders. If you wear pajamas have the waist strings as loose as possible. Better forego the trousers, anyway.

Standing, heels together, raise your arms straight above your head. Now bend from the hips, knees rigid, bringing the arms still extended toward the floor until the fingers touch the carpet.

If you have not tried this or similar exercises it will be difficult at first. The knees will try to bend, they will stretch so you hear them in the stretching. But if you are too knock-kneed—all women are knock-kneed to a certain extent—this exercise will help straighten the legs. You must persist in this exercise for ten minutes. Try to reach the floor with your fingers ten times each morning for the first week or so. Then increase the number of

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times until you can bend easily twenty-five times each morning.

During all these efforts the mouth must be kept closed. Don't let it get the best of you. When you find you cannot go on without taking a mouthful of air, stop and take in and blow out through the nostrils. Then start again. After a week or so you will find it a joyful thing to be able to breathe right; to find your toes tingling and cheeks red with pure blood.

Having, by this method, developed some strength in the stomach muscles you must commence to get voluntary control over them. In bed upon your back with nothing over you but a thin sheet, fix your eyes and attention upon your abdomen—stomach. Now start a movement of its muscles—any kind of movement possible at first. See if you can bring the contents of the abdomen upwards, then force them downwards. If so, wiggle your insides; then toss them in one direction, then in another, then from side to side. When

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you discover you can control them in one direction, practice that set of muscles. Then try to get the muscles to twist and turn another way. The point to reach is that of controlling them in the same way you do those of the arm or leg. WILL the stomach muscles to do your bidding. Of course it can be done and must be done if you want a useful diaphragm—if you want to breathe for beauty and health.

If you have not seen you have heard of the Oriental stomach dancers; the real ones, not those disgusting contortionists seen on the Midways. One of the tricks which is the cause of the wonderful beauty of the Eastern girls, is the development of their big breathing muscle—the diaphragm. Through its action in drawing in large quantities of fresh air and throwing out waste material, these girls have a delicious and fascinating complexion and skin, eyes of desire and the grace and suppleness of a fawn. They eat enormous quantities of sweets, yet do not become corpulent as long

as they keep up their dancing exercises. True, they become awkward and fatty as they grow old, but never would they reach this state if they were allowed to get out in the open and consume that large amount of fresh air their breathing muscles would draw in.

Keep up this stomach exercise throughout your life. Naturally, as in any other form of muscular development, when it has reached commanding power only slight exercises are necessary. Obviously, for women this form of muscular development of the abdomen is of greater importance than for the ordinary man. After maternity the muscles keep the woman in good shape, during the child-bearing intervals they not only act as a protective armor but increase the amount of that oxygenized blood so necessary for the well-being of child and mother.

You simply **HAVE** to breathe right if your diaphragm is big and strong. You can't get away from it.

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Breathe only through the nose when developing the stomach muscles and during any and all kind of exercise. I shall not repeat this absolutely necessary admonition and commandment. Nothing but a dying hen, and a human being whose air passages are stopped up, ever breathes through the mouth, and the latter is always dying by inches; literally by inches.

Having obtained some control over the muscles of the abdomen or stomach while you are on your back in bed, you should commence the same movements while standing upright. In this position you can accomplish much more than is possible while lying on the back.

Upright, with hands passively hanging by the side of the body, draw up the contents of the abdomen until the latter looks like a deep valley; as though everything inside of you was up in the chest cavity. Then push them down until you are laughingly and innocently ashamed of your protruding belly. Draw up, push down, wig-

gle, wobble, twist, turn all your insides over and around. At least that is the feeling you should have.

When you have this will power over the abdominal muscles and contents, constipation, that curse to American girls and women, will never be your lot. Muddy complexions, headaches, rushes and flushes, nervousness due to indigestion and neurasthenia caused by body poisons and other troubles so distressing to many women, will be only hearsay to you. And mind you; this means for life; and life is one long pean of joy under such conditions.

You see all this abdominal control is really internal massage; the way a horse or dog, any animal, keeps in perfect health. Animals get this internal exercise by rolling. When we went upon all-fours that is the way we kept clean inside. But since we have learned to walk upright the abdominal contents are not in the position to get much benefit by rolling. The recent promoters of this form of exercise for

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women had the right idea. The only fault with it was that it was about a million years behind our present body demands.

Developing the diaphragm means no more taking of cathartics or laxatives; that nothing deleterious can remain in the intestines or other internal organs. It all means a proper and very active blood circulation through right breathing, which means **HEALTH**.

The blood-making spleen sends out that rich material which causes your cheeks to be red and ruddy; the other blood-making cells in the marrow of the bones voraciously grab the oxygen the diaphragm draws in. This is the whole secret for all these exercises and muscular development. They make you, not merely cause you, to breathe right and all the internal organs get the benefit of this right way of breathing.

They do not get this benefit by the ordinary, everyday way of breathing, and this is why so many men and women, when they reach middle age, have stiffened intestines,

hardening of the liver, inelastic arteries and veins, cold feet and hands, indigestion and nervous dispositions—in fact why so many individuals commence to deteriorate at a period in life when they should and can be in the best of physical and mental shape.

If your wife has cold feet, don't try for a divorce, but have her commence the exercises advised, and shut her out of the house until she has walked five miles a day with mouth shut and nostrils open. Proper breathing habits will put happiness into any home. Many a man walks home with open mouth trying to breathe down a tell-tale odor. It's not the way. Let the air pass through the nostrils and be warmed by the inner air passages and upon its return it will disguise the enemy as far as such an enemy can be disguised. Anyway, the oxygen taken in the proper way will oxidize the alcohol, and that helps some.

Mere breathing, deep breathing just to develop a big chest capacity, is valueless unless the inhaled air can reach every-

where—every tiny cell in the body. The man with a big chest is not any better off than a man with an average size lung box if the latter uses his breathing organs so as to get the oxygen throughout his body. A man may, by certain forms of exercise, have an exhibition chest, but no life-prolonging breathing organs. That is, his diaphragm may remain undeveloped, or he may, in ordinary work, breathe partly through his mouth.

Obviously, the greater chest capacity the greater endurance and immunity from disease if the possessor of this lung power knows how to use it. He generally does know how to use it if it is a self-developed chest. But there are individuals born with fine lung power who never get its full power. It is the old story; that for which a man strives and labors is valued and used to its best advantage; that which comes without individual effort is neglected and its value unrecognized.

There is no Royal road to health any

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more than there is a Royal road to any kind of lasting achievement. Understanding, persistence, work, practice in breathing is as necessary as in any other accomplishment.

Before you dress to go to a dance or a dinner, no matter if you have been through this diaphragm exercise in the morning, go at it again. Clear out the ashes and cinders in the body which have accumulated throughout the day. Make as much room for air and food as possible, for you will be somewhat restricted in breathing by the fashionable costume dictated by convention. And with us convention in this matter is limited to no class.

Upon your return from the evening's pleasures remove all tight and confining clothing, stretch every inch of your body and EXHALE with vigor and inhale with ease. Do not do any more. Get into bed and let the food be ground up, separated, and its valuable building stuffs go to their places.

But in the morning! Big exercises for the stomach if you have dined well the night before or danced long and merrily. If your head aches, your mouth feels stuffy, stand before the open window and take the chest-breathing exercises. But better still, after this practice, get out into the open air and breathe, breathe deeply and keep it up.

There is not a man or woman who cannot find some period in the day during which they can get fresh air into their systems. Take for instance the woman or man who has to toil daily between walls and under roofs. Consider your own work and how you avoid fresh air in getting to it. You may live some distance from your place of work which compels you to take trolleys or subways, tunnels or elevated. In rushing from workroom or office direct to the cars you believe you are saving time. For the day; yes, for the month, probably; for the length of your life and for the continuance of your health—NO. You

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are shortening your time upon this earth; shortening its usefulness if not its absolute activity. And it is such a simple matter to avoid this threatening state of affairs—and it doesn't cost a cent.

Coming from your work, walk in the fresh air, breathing deeply. Walk for five or ten blocks, then take your car. Get off five or ten blocks from your destination and walk there, breathing deeply.

You see the trick? By breathing for ten or fifteen minutes before you get into the cars you have cleared the nasal passages and got rid of all the by-products of the day's intake. If there are disease germs—and there are bound to be—coughed or floating around in the crowded car, they can find no hearty welcome or lodging places in your system. But a lot may hang around the entrances of the breathing apparatus and bring you down with a "bad cold" if you go direct from this car atmosphere to your home. Getting

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out and walking, exhaling forcibly for a few times, then breathing deeply, making that diaphragm pinch corset or waistband, belt in man, discourages these waiting germs, and you may safely go your way along a healthy life. And you will not carry any infection home to the babies or children—this is worth considering.

In the mornings on the way to your work, carry out the same method of keeping free from disease and from contracting colds. The kinds of colds you get from neglect of breathing away microbes, kill thousands of people every day—healthy, strong people, too; just those who neglect or do not understand the value of breathing so as to be immune.

And what splendid opportunities for obtaining and retaining health that person has who has to journey daily across rivers and bays. Why, ten minutes on a ferry boat, out in the open, breathing to the full, will make you FEEL life. Little worries “the blues,” indecision, fog on the brain,

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all, all will be driven away by a copious dose of oxygen. Just as a fresh wind will clear away fog, by bringing refreshing atmosphere, clear skies and bright sun, so will draughts of oxygen affect the mind and body. And the causes for all this are tangible: chemical, physical and physiological, acting together under a law of nature.

The person who habitually goes by the way of underground cars, when he or she can go in the fresh air and sunlight, rain and snow, scarcely deserves sympathy, and, in all conscience, he will need sympathy and care in later life.

Takes time? Of course it takes time. Every worth-while growing thing in this world takes time. Those things which hurry in growth die in a hurry. The poplar hurries up and is a soft, useless tree. The oak takes a very long time to breathe and grow, but it cannot be blown down, rooted up, and its wood is of great value to man.

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To get up a half-hour earlier in order to walk and breathe deeply robs you of necessary sleep? Not a bit of it. The benefit to your whole body and mind of this half-hour of walking and air feeding is worth more to you than two hours' sleep. Again, the air food makes you sleep better, and seven hours' of sound sleep is far better than ten hours of restless snoozing.

The same with a dinner half an hour later than you have been accustomed to. The walk, air-burning up of dead material in your system, is worth more than your dinner. For, if you have not breathed in pure air before eating you will only have an increase in the clogging of your pipes. Get your dinner, of course, but make eating and sleeping wait upon reason and rule for lasting health.

CHAPTER VI

BREATHING THROUGH THE SKIN NECESSARY FOR HEALTH

MANY people go through life in a state of partial poisoning because their skins cannot breathe readily and constantly.

These people are the neurasthenics, the ever-complaining, the easily exhausted, the ambitious who have not the lasting powers to carry out the steadfast labors necessary to accomplish their ends, the persons who have a "three-o'clock fatigue" and a four-o'clock cocktail.

These are conditions showing wrong or faulty breathing habits of the skin, even if chest and lung exercises are kept up daily. The pores and little sweat glands are not in that natural, healthy state which permits a constant breathing out of toxic material,

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nor can the skin get the tonic effect due to air constantly circulating around it.

Every little pore has its set of tiny nerve endings. These are stimulated by the circulating air, and thus cause the sweat glands to operate. When these skin pores are closed to the air, good skin-breathing is impossible.

Those persons who are wanting in energy through faulty skin-breathing fully believe they are careful in the matter of cleanliness and bathing. So they are, often altogether too careful in the wrong way.

The trouble is they do too much soaping and scrubbing of the skin. With women this soaping is caused by the fear of perspiration odors. The odor of a healthy skin is a very pleasing odor, as any mother knows when snuggling her baby. It means the skin is pliable, soft and exuding the natural skin pomade. The over-washed, dried skin has a displeasing odor.

Fresh water taken into the body and fresh water poured over the body, keeps

the skin sweet and active—always fit to breathe.

A pint or two of fluid containing poisons and harmless dead stuff are exuded and exhaled from the skin every twenty-four hours. The process goes on slowly and continuously and, except during copious perspiring, is a function unconsciously expressed.

We do not fully realize the great extent of this breathing of the skin except in cases of illness where the skin becomes dried or overheated. The hot breath, headache, pains all over the body, tell us that something is wrong with the body or its functions. The skin has stopped breathing; that is all, but it means irreparable injury to kidneys or liver if it continues. We all know, however, that many dangerous crises are passed when the skin commences to pour out moisture—to get back to its normal breathing condition. This is the time when the doctor leaves the patient with hope, and not before.

To know how to breathe through the

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skin means simply this: Keeping the skin in such a healthy condition that it can throw off fluid upon the least physical exertion. Not merely from the trunk of the body, but from the arms, feet, nose, neck. If it can always do this one may be certain that the unconscious breathing of the body's whole outer surface is constant.

Every time you practice deep breathing or take in the rejuvenating air, walking in the wide open or standing at the opened window, you force pressure against the skin from the inside as well as from the outside.

This pressure expands the big and little folds of the skin; stretches it just enough to act upon the pores. By this mechanical movement you add just so much more force and energy to the whole human machine.

There are a few habits and customs which are too common and which prevent proper breathing through the skin. One of them, which I have casually mentioned,

is the use of too much soap and daily soaping with hot water. Soap only should be used to wash off external dirt and grime.

After vigorous exercise the sweat of the body should be washed off either by cold or tepid water. The same means should be used in washing off the salt grains after a sea bath.

To use soap of any kind in the daily bath is injurious. It washes off the natural skin ointment, irritates the pores and interferes with their activities. Many cases of that distressing and embarrassing affection called hives are due to too frequent soaping in washing off the perspiration of a summer's day.

Hives are protests against stopping good skin-breathing. When you are troubled by this harmless but exceedingly annoying affection, just give the skin a wash with cool water in which a little bicarbonate of soda has been stirred—or common washing soda—and the pores will start again to make the skin's natural ointment.

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Another thing you should do to keep the skin in proper breathing condition is to dry rub it night and morning. Not harsh rubbing; just gentle stroking of the body's surface from the little toe to the forehead. After the morning's bath or sponge a good, quick rub and without the application of any sort of perfumes, ointments or powders.

Ointments, perfumes, powders and other cosmetics, which so long have been associated with the bath and toilets of the Oriental beauties, are merely artificial aids to artificial lives.

The girl or woman given over to slaves to perfume and powder, was not expected to last long. She was just a play toy for the hour. She had no energy, no initiative, no ambitions, no real work. How could she, having her breathing capacity shut down to mere existing efficiency?

Such girls and women never knew what activities lay hidden in the human body and mind. The partial loss of the skin-

breathing power was never felt, for these unfortunates only existed as decorated and degraded females.

The girl or woman of today who wants health of mind and body, and all this makes for success and happiness, never should plug the pores of her skin by the use of cosmetics and ointments.

The use of powder—and only PURE rice powder should be used—upon arms, bosom and back, acts as a breathing interferer. Enameling the skin is always an invitation to self-poisoning. There are occasions when you must use some form of powder. That is, social conventions compel its use. But you should always remember that it is keeping your delicate skin from exhaling to its full power. As soon as possible this powder and all other cosmetics should be washed off, and washed off thoroughly, with warm water and the skin then gently rubbed with a soft linen cloth. Again I caution you: Don't use soap.

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The skin makes its own pomade, cold cream and oil, and every time you soap the skin you wash off these necessary greases—necessary because they keep the pores in a condition to breathe.

The girl or woman who attempts to stop free perspiration is doing the same sort of injury to her body and health she would do if she tried to plug a portion of her lungs.

Yes; indeed, I mean just that!

Unless the profuse perspiring is due to extreme nervousness or to some real disease, it means the individual's system is trying to rid itself of body poisons through skin-breathing.

You may bring on an attack of acute indigestion or kidney poisoning by preventing the skin from breathing to the full. Some persons are slow-acting in the kidneys and liver, and the skin in such cases takes up the residue and throws it off. Never attempt to stop it doing so.

A profuse sweating coming on without any effort on your part is a certain sign

you have passed over a serious state of internal affairs. A chill without any external cause is a certain sign that your skin has stopped breathing and something serious threatens. In this case the first thing to do before the doctor arrives is to get breathing action in the skin—sweating. Drink plenty of hot water, go to bed wrapped up in heavy blankets with hot-water bottles at feet and round the body.

Drinking plenty of water is the best way of aiding skin-breathing. Before breakfast two glasses of cool water always should be taken. Drink lots of water during the day. Water also should be taken at meals. For the fleshy woman this is an excellent way to reduce and harden the flesh, for it promotes skin-breathing, and this means a loss of extra fat. The old ideas about not drinking water at meals and that drinking water increased the amount of fat, are known to have been erroneous.

Many girls and women cannot breathe properly through the skin at night because

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they go to bed with an area of the skin covered by powder or other pore-plugging stuff. Generally this is due to fatigue, laziness or lack of understanding of the evil effects. Other persons, both men and women, sleep with too heavy bed clothing, some with thick or tight night clothing.

Give the skin breathing room. Give it air all around. Have the bed clothing and night apparel so light and loose that the air can circulate everywhere around and under the body.

If your skin itches or burns it means that either the air does not circulate freely around it or else that you have washed off all the natural grease. This latter condition causes an unseen cracking of the outer skin, exposes the tiny nerve endings and itching and burning sensations follow.

This sort of skin irritation is a skin cough. The breathing function of the skin is being interfered with and it lets you know the fact by the nagging feeling.

So again I say: Give the skin air if you

expect it to breathe thoroughly throughout the night and be jolly and comfortable, thus helping the lungs and kidneys to do their share of health work.

There is no organ or function in the human body which will not do more for you than all the doctors or health authorities in the world if you will heed their calls and signals for help and learn to read the messages they send to you.

And there is one sure thing: If you dose yourself with drugs and "cures" your system will be deaf, dumb and blind to any and all signals and calls. Drugs and narcotics will put your extensive and delicate wireless stations completely out of order; sometimes so they cannot be repaired.

All men would be far better off if they went naked to bed. In this natural state there is always room for the skin to breathe freely and successfully. What if there should be a fire at night? You will have more energy and be quicker in getting into presentable shape than the man who is

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lethargic because he has not fully breathed every night through his skin.

A man has the right to be ashamed of his naked body if he has not utilized all his forces which make for health and physical beauty. But no man has a right to be ashamed of a naked body which shows perfect health and care. He should be decently proud of such a body.

Any man who has the slightest suspicion that his kidneys are a bit slow in action, can relieve them and rest them by sleeping in his bare skin. Sleeping in *bear* skins will play havoc with the kidneys.

Sleeping in the bare skin compels another condition most favorable to health—a separate bed and wherever possible a separate sleeping-room. Sleeping in this manner there is space for the skin to get all the benefits of turning and tossing during the night.

The natural turning of the body which is not disturbing, or really a conscious movement, may be likened to the rising and

falling of the breathing movements of the chest. Rolling over in bed is nature's way of getting every inch of skin surface in position to breathe.

Women as a rule—and it should be a rule—wear such flimsy and light night apparel that their skins find easy breathing where it is free from pore-closing stuff. However, every woman should try to get an air bath once a day. This may be had by lying naked where the warm or warmed air can brush over the body. But lying round in a bathing costume under a hot sun should be carefully considered. Too long pounding of the sun's rays upon the human skin is injurious. Especially so is this in the case of blonds—men and women.

Don't bundle or wrap the child in close-fitting and thick night clothes. If you are afraid of a healthy child "catching cold" there is something wrong with your knowledge of the rules for health.

Frightening dreams, wetting the bed, colics; all the many little and big nightly

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troubles and discomforts of the baby, mostly are due to the skin being pressed and packed so it cannot freely breathe. The poisons accumulating in the little body are held back, finally get into circulation, and then almost any trouble may follow. And then think of the very large skin surface a chubby child presents to the air. All its many folds, creases, dimples, must have freedom for their pores to breathe.

Don't powder the baby's sensitive skin except in some chafed place. Even chafing may be avoided if you are careful not to use soap every time you wash him. When you have to use a plain soap, see that none of it is left in the skin creases and folds, and then held there by tight bands or clothing.

More babies are bundled into feebleness than ever caught cold by exposure to winds and rains. If you accustom the child to sleep so that its lungs and skin get all possible air blowing around, baby will not catch cold even if it should be forgotten and left out some night.

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As I have stated, the great safety-valve of the kidneys is the skin—the skin that can breathe as well under the arms as on the abdomen, on the forehead as well as through the ankle surface.

Purposely I admonish: To breathe through the skin for perfect health you should sleep alone. This means everybody: man and wife, brothers, sisters. Only the nursing child has an hygienic right to be next the mother's skin exhalations.

Remember that the skin throws off dead material every minute, just as the lungs do. You would not think of sleeping night after night so close to the output of another's lungs that this poison could be inhaled by you. Neither should you have the emanations from another's skin circulating around your breathing pores.

Think this matter over and you will understand.

Did it ever occur to you what influences right breathing habits and the quality of

BREATHING THROUGH THE SKIN

air breathed, have upon ideas, views of life, mental output?

Have you ever read in the books written by men who lived out-of-doors, do their work in rooms where sunlight and oxygen are ever present, anything but the joy of living—sane, optimistic words?

The air they breathe, the long walks with head up, chest out, the deep inhalations and exhalations bring to these men and women a true and unpoisoned sense of life and health—mental balance.

But see into the living, breathing habits of the other kind of writers, especially the foreign, who write in gaunt garrets or stuffy cafés.

These half-breathing men and women, these foul-air consumers, give us what?

Novels which are so terrible and scarifying. Books in which only the reflection of the nasty air is seen. Poems which exhale bestiality and morbid eroticism.

No matter about these writers' struggle with poverty. There is a worse poverty

than the material. It is the poverty of health due to the intake of poisonous air and the inability to get rid of the body's poisons.

These writers, struggling with unhealth, can give us only books saturated with morbidity, illusion and delusion. The vitiated blood circulating in their optical centers gives them the illusions; that circulating among the brain cells, delusions.

The trenchant bitterness of the shop socialist is mostly due to the same causes. The nagging, dissatisfied New England invalid is such because she isolates herself in a superheated room, stuffs all entrances where the air might get in, walks but little and then bundled up like an Esquimau baby, sleeps with the windows closed and over her attenuated body a mountain of feathers and heating quilts, and shudders at the only thing she needs to make her well—fresh air in her lungs and driving through her skin.

CHAPTER VII

NEW TISSUES FOR OLD—REJUVENATING THE BODY AND SKIN

MANY men and women are aged simply through weak activity of those organs and functions which can, under proper conditions, make and put into circulation new red blood cells.

It is sad folly for one who is overfat and worried about facial wrinkles, to accept these conditions as necessarily accompanying years. The hopeless resignation to the idea that one must become wrinkled and stiff-jointed, lose the cheeks of youth, become stale in health and agility, is the very sure way of getting into this state.

One may merge into the sixties and seventies as gracefully and as happily as into the thirties. There are the same forces

for making red cheeks in the woman of sixty as in the girl of sixteen. But generally we find in the older woman that the red-blood making power is working only on half-time and without any care or supervision.

There is no mystery or occult knowledge of the way the proper breathing habits can rejuvenate the failing body and organs. That such renewal can be brought about by developing the breathing organs and muscles will be readily understood by the following explanations based upon very recent discoveries and experiments.

The increase in the number of red blood cells in the body is brought about by *mechanical means*. This mechanical work is done by the body itself, but is not completed without assistance on your part.

The condition of the blood always adjusts itself to a variety of bodily and environmental factors. As an example: When you go up into the mountains there is a decrease in atmospheric pressure.

This means that the whole body is released from a certain weight or pressure it had to withstand in a low altitude.

This release from a certain amount of atmospheric pressure on the body's surface lets loose blood corpuscles which were confined and pressed in some small spaces or tiny arteries and they get into the general circulation.

In middle-aged persons and those beyond, there is an unequal distribution of red blood cells, due to pressure of fat, inelastic arteries and weak diaphragms. This latter breathing muscle may be, and generally is, hindered in its freedom by an overdistended stomach or intestinal tract.

This state of affairs means that red blood corpuscles are jammed in or pushed aside to certain extremities or into blind alleys. In these places they are concentrated, and unable to obtain oxygen, the cells die, leaving the cast-off materials to be absorbed and make wrinkles and cause stiff joints.

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These prisoners—red blood cells—in their concentration camps cannot get out except through tiresome efforts, and often they have exhausted much of their stored-up oxygen when they do find freedom. Under these conditions they are as useless to the human organization as a lot of skillful mechanics would be crowded into a room and unable to get at their respective machines.

Any mechanical movement or driving force which stirs up these red blood corpuscles puts them into circulation—starts them doing their allotted work in rejuvenating the body and its organs.

Certain forms of exercise will aid in accomplishing this change from age to youth, but not unless right breathing methods are rigidly adopted and kept up. Emotional states, such as fright and anger, will also temporarily let loose locked-up red blood cells, but also let loose evil forces from the ductless glands.* Conse-

* See "Sex Problems in Worry and Work"; Clode, publisher.

quently this method of releasing red blood cells should be avoided.

In cases where vigorous exercises are not at first advisable, change of atmospheric pressure is the primary treatment for unlocking red blood cells. For those accustomed to live in a high altitude a change to a much lower one is beneficial. This change brings a pressure upon the body's surface which squeezes out some of these locked-up blood cells, while the same reaction through *release* of atmospheric pressure takes place in those going from sea-level to a much higher plane.

But it is not at all necessary to make these changes to bring out the red blood cells from their prisons and hidden caverns. You can do it in your room, office, on a walk. It is simply a matter of first understanding, then breathing and exercising. Understanding enables you to put to use those muscles which squeeze out the blood cells; knowledge of how to breathe gives them their needed oxygen. This understanding

of what and how to get from the power of muscle contraction; this knowledge of correct and rejuvenating breathing, has been lacking in all forms and kinds of education. Many methods and much instruction have been given about the value and necessity of deep and slow breathing exercises, and the majority of them have been of great benefit. But the fundamental facts, the physiologic reasons, have not been really put before the public, and some of the breathing exercises not founded upon these known principles of modern physiology.

The body constantly makes an attempt through mechanical means to regulate the red-corpuscle content of the blood. Much of this regulating is under nervous control. When there is lack of oxygen in the blood cells this condition reacts as a stimulant to the nerve-cells, and these try to hurry up the blood to greater circulatory activity—to get oxygen.

There are two organs which principally

supply the body with red blood cells through mechanical action: the liver and the suprarenal glands. I mean by this that when there is an extra demand for red blood cells this demand is complied with through the liver and suprarenals if they can be put to work.

So now we come to the real value and the true reason for breathing in such a manner as to put these latter organs to work furnishing red blood cells and the pressure put upon those imprisoned to be of such a nature as to free them.

It has long been known that massage of the abdomen increases the number of red blood cells, and it has been supposed it did so by mechanically squeezing the blood cells themselves from their hiding and confining places in the fatty or unmuscle abdomen. But now we know this is not the true physiological explanation. Remember I am now referring only to abdominal conditions, but very important conditions to understand.

The suprarenal glands secrete a substance called epinephrin. This is a very active stimulant to the red blood corpuscles. Massage of the abdomen drives this epinephrin into action, which forces the blood cells to take up oxygen—if by proper breathing you are furnishing the oxygen.

But it does more. By reflex action it draws out from the liver the red blood cells, which also rush about for oxygen.

See what is coming now; don't you? Some combination of ways and means of squeezing out blood cells and the suprarenal substance and taking in oxygen at the same time. This, systematically done, makes the old young again.

The first essential to look after, before the breathing exercises commence, is to see that there is absolute freedom from clothing pressure. The whole trunk—waist, neck, abdomen—must have its vessels free to send and receive the full force of the blood stream.

Overstout men who are in the habit of wearing abdominal belts, of going around with a mass of soft fat pushed upwards and inwards by "shape-reducers" and all other artificial and ridiculous signs of self-satisfaction and stupidity, never can realize the least benefit from the most vigorous and systematic breathing exercises. No, not if they do remove these male corsets for the time being. For breathing exercises mean much more than the few minutes you stretch and breathe deeply, slowly. They mean a continual preparedness to take in fresh air whenever and wherever possible. They mean a freedom and development of the breathing muscles which can be voluntarily put to work at any time.

Stand in a room where the window is open about a foot at the top and at the bottom. This permits a good and active air circulation. Stretch the arms outward, upward and backward. Do this several times. Then clasp the arms behind the

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back, stretching them so that the shoulders are drawn to a straining point. Release and exhale through the nose. Take deep and SLOW inhalations, letting the air out of your lungs through the nose.

Now bend the arms upon themselves good and tight; both at the same time, then alternately. Let them hang down passively while you turn and twist the neck. Do this six or eight times, or until you know by the feeling the skin has been stretched. Bring down your chin until it either touches the root of the neck or presses upon the double or triple chin folds. Throw back the head, putting a good tension upon the forepart of the neck.

During these simple exercises you are to breathe only through the nose. When you feel "out of breath" take a good inhalation, hold it for a moment, then exhale with two or three puffs from the mouth.

Now keep the mouth tightly closed and breathe only through the nose during the following exercises. Head up, shoulders

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back, heels together, bend one leg backward at the knee. Take hold of its foot with the corresponding hand and bend it to the cracking point. Release the foot and bring it to the floor. Repeat this movement six times. Do the same with the other lower leg. Then the same movement, but using the opposite hand. That is, left foot, right hand; right foot, left hand. Erect, take a long, slow breath and exhale it through the nose; another one and blow it out through the mouth, and forever after, until further instruction, breathe only through the nose.

Again upright, head and shoulders back, commence to breathe deeply and slowly. Each time hold the intake for three seconds, then exhale through the nose. Keep this up for five minutes.

In the same position, place your open hands on the soft spots just over and slightly in front of the hip bone. Grab a fold of flesh and fat in each hand, and as you inhale slowly and deeply, let the

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folds of flesh gently glide, but not get away from your grasp. Exhale slowly, taking up and pushing up the flesh as it rolls under your hands. Now hold your breath for a moment while giving the fleshy rolls a good hard pinch and grasp. Repeat several times until the grasped and pinched sides are literally red and slightly sensitive.

The above-described simple exercises should be kept up for two weeks.

Assuming you are the average man or woman of forty and over with a stomach to reduce and diaphragm to strengthen, get a shot bag with buckshot in it. For the average man six pounds in a full-sized shot bag, for the average woman four pounds. The shot bag will only be partly filled.

On your back in bed, no pillows or bolster, place the bag upon your abdomen. If it is a mountainous or hilly abdomen you will have to gently hold the bag in place. With what voluntary movements of the

belly muscles it is possible for you to make, move the shot bag around; toss, jump it. Use some effort; get "out of breath." When you feel you must expel through the mouth, rise, and in an upright position expel through the mouth. Then inhale and exhale a few times through the nose. Lie down again and go through the bag tossing and rolling.

One thing to always keep on the mind. All breathing exercises should be taken standing upright. Don't try any gymnastic stunts and keep breathing at the same time. When air is needed in the lungs—extra air of course—assume the upright position and breathe slowly and deeply. If you try this rational method of right breathing when in some body-stretched position, the diaphragm is put upon a strain and in time its tone will be lowered.

The extraordinary effects seen in the professional physical culturist when he inflates his chest and then blows out through

his mouth to show how completely the lungs can be emptied, are for exhibition effects only. It makes more noise, produces upon the spectator the idea of wonderful power, and the slight bending of the trunk of the body accentuates the abdominal muscles.

Try this way of completely emptying your lungs and you will find it apparently a much easier way than the several movements necessary to empty them through the natural channels for breathing—the nose. But just because it is easier is why harm is done. You cannot fully develop the diaphragm unless you use it to force the air in the lungs upwards and outwards through the nasal passages. To get this air thoroughly expelled it takes two or three muscular contractions of the diaphragm. Forcing the air by the shorter way, through the mouth, takes only slight effort in which the external muscles of the stomach, aided by bending, mechanically push it out.

In driving the air from the lungs through the nose, you are forced to stand correctly, head back, neck extended. Blowing through the mouth you naturally stoop somewhat. Furthermore, the back muscles, when you breathe through the nose, come into play, which is important for the man's development, and the ribs are forced to rise higher and sink lower, which is of importance in the chest development of the woman.

When you leave a room to get into the stimulating air of outdoors, you feel as though you would like to actually swallow some of it. Now, under these circumstances it will be all right to exhale from your mouth for a minute or so. But when you have done so, start right breathing through the nose and do not again use the mouth until another period of close air breathing has been your unfortunate lot.

Remember this about mouth-breathing: The teeth and mucous membrane of the

mouth were not made to withstand a constant spraying of carbonic acid. This is the kind of spraying they get when the habit of mouth-breathing is kept up.

Be certain to take the measurements of your chest and waist every week. The first two weeks will end in disappointment, the third week will be the commencement of hope, the fourth, joy.

Of course the stomach dancing of the shot bag is in addition to all the other exercises outlined and should end the night's work. Much faster improvement will be made and all tendencies to constipation more quickly removed, if you spend five minutes every morning with the shot bag.

By these various exercises superfluous fat is worked off and burnt up. The diaphragm comes under your voluntary control to an extent that will astonish you. With the diaphragm under full control of your will you need never again become

overfat, out-of-breath climbing stairs, puffy nor constipated.

After four weeks of the exercises I have described, you may commence vigorous bending, twisting, stretching of all the trunk muscles. No specific directions are needed for these exercises except to state that whatever part of your trunk muscles seem to rebel, go to them. Let no seeming difficulty prevent you from conquering any particular muscle or group of muscles. The information I have given regarding the confined and pressed-in red blood cells, will make the reasons and necessity for all these twistings and turnings of the body upon the hips plain to you.

If you go at this vigorously you will require—or your new blood cells will—a large amount of extra oxygen. You will find the deep, slow breathing after a few moments of this form of exercise not only necessary, but compelling and exceedingly pleasing.

Hold your mouth tightly closed while

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twisting and bending and also hold your breath as much as possible. Then when it is no longer possible to proceed with the exercise without letting out the breath, stop, open your mouth and empty your lungs. Now, close your mouth and breathe *slowly* and deeply through the nose. Start again with the body bending and twisting stunts, repeating the breathing methods. Keep up this exercise for ten minutes.

All these exercises must take place when the stomach is fairly empty. That is, they never should follow a full meal, when you feel really exhausted—not simply tired or a bit lazy—nor after any nervous strain or emotional period. These latter states may be benefited and recovery hastened by simply breathing slowly and deeply in the open air. But all this should be done without extra effort and cease just as soon as it causes effort.

There are many reasons why one should always breathe through the nose aside from those I have mentioned. But to go into

details would lead us far beyond our legitimate bounds. Suffice it to say that the lining of the nose contains many nerve endings and bulbs, which carry various and sometimes curious messages to the brain and nerve centers. Irritation of these nerves, inability to function, over-stimulation, all and each sort of disarrangement, play havoc with man and woman. The general health can be affected, hidden impulses sent rioting, eyes weakened and olfactory and other senses injured.

These sensitive push-buttons located along the nasal passages are kept in a healthy condition by the air passing to and fro; by the carbonic acid solutions, alternate cooling and warming, constant secreting of a protective fluid.

Man uses his diaphragm and back muscles in breathing somewhat differently than woman does. Especially does he need to develop those muscles in the small of the back, as they help push up and draw down the big breathing muscle. Woman, in

breathing, uses more of her chest muscles and these are of greater importance for her to strengthen than the back muscles.

Stretching of the arms in all directions while standing upright; the steady inflation and deflation of the lung cavity, freedom at all times from any confining pressure on the trunk of her body from the upper part of her neck to the lower ribs, are conditions absolutely necessary for woman's chest development.

Corsets which fit snugly around the waist and hips do not interfere with a woman's ability to breathe correctly. But she must practice breathing exercises so as to develop the upper portions of her lungs and give the ribs every opportunity to expand and contract the chest cavity. This only can be done while she stands free from all clothing except such as merely hangs loosely from her waist. If modesty has gone so far into her system that she cannot look at her naked trunk, then a weightless blouse will suffice.

An infant breathes almost entirely by the movements of the diaphragm. This important fact all mothers should never forget. They will then see that no pressure of bands or clothes prevents free movements of the little one's belly muscles, and well understand why the child should never be propped up in cradle or carriage.

You can derive only partial benefit from right breathing if your body is constantly taking in even small quantities of alcohol.

Alcohol robs the blood cells of oxygen, for oxygen has great affinity for alcohol, or alcohol has for oxygen. It makes little difference; the point is, that as soon as alcohol goes into the system it is oxidized.

But only a certain amount is burnt up—oxidized. Exceed this amount, and because there is not sufficient oxygen to burn it up—and no extent of breathing oxygen in can do it—one becomes poisoned by the alcohol and its by-products.

It is true that in the average person about two ounces of alcohol can be com-

pletely burned up every twenty-four hours. But common sense will tell you that all this oxygen is wasted, because if it did not have to work upon the alcohol it would be working upon the blood cells.

This is why drinkers get old far beyond their years.

Hope is only an expression of a clean body and clean mind. Its foundations are oxygenated blood cells.

The reverse of hope is depression; its real meaning is that there is some lack of oxygenated blood cells and freedom to circulate is somehow restrained in others.

This is the explanation of the change taking place in you when you start to work depressed in spirits, but come home—if you have walked and breathed deeply—feeling hopeful and elated.

CHAPTER VIII

SOME SIMPLE BREATHING EXERCISES

OXYGEN is the only stimulant upon which you can safely rely as a depression chaser and body builder.

All breathing exercises should have for their one purpose the forcing of oxygen into all parts of the body.

Breathing exercises should not be confused with physical exercises, for while breathing means physical and nervous strength, by itself it has nothing to do with mere muscular development. However, it is almost impossible to have oxygen freely circulating in the body without the good effects showing in muscular development.

For example: In many breathing exercises in order to learn to control the breath and force it to cause pressure upon

muscles or organs, resistance and concentration are necessary. This resistance develops muscular tissue. Place your hands, interlocked, behind your head. The back of the head should rest against the palms. Now try to push the head backwards, resisting it by pressure of the hands. Every muscle in the neck and hands, arms, shoulders, will be put upon tension. While doing this hold your breath and keep up the resistance of the opposing forces just as long as you can hold your breath. Let the arms drop passively to the sides as you let out the breath *slowly* through the mouth. Return to the same tension attitude, but this time let the breath out of the nostrils at second intervals. Take a deep, slow breath and repeat.

This method of tension and concentration should be exercised with every group of opposing muscles in the body accompanied by the breathing details. For instance: Stoop over with arms hanging down. Now imagine, or make it an actual

SOME SIMPLE BREATHING EXERCISES

physical fact through resistance, that you are lifting a heavy weight. Pull upwards, holding the breath. After the tenseness of arm and back muscles, legs and abdomen is telling upon your lung strain, resume the upright position and exhale slowly through the mouth. Take a deep, slow inhalation, hold it and repeat the tension exercise, but then exhale through the nose.

After a few moments of this work breathe deeply, slowly, and place the hands over the pit of the stomach. Gently feel if the diaphragm is doing the air forcing instead of the chest muscles. If not, keep up the exercises day after day until you realize that it is the big belly muscle you have under control as well as the rib muscles.

All animals upon rising from sleep or rest first stretch every limb and muscle before facing the sun and breathing deeply and slowly.

The child should be taught to stretch,

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reach, with hands, fingers, feet and toes. Get it to play "toe reaching" in the morning as an exercise in dressing. Where there are two or more little children the game may be made quite interesting to them.

The child standing upright, shoulders back, arms relaxed, may have the stockings and shoes just far enough away to make it real play to try to reach out with one leg and foot and pick up the stocking with the toes, then draw it to the extended hand.

First the right foot for the right stocking, then the left foot for the left stocking. The same movement should be gone through in reaching for the shoes.

Teach the child to stand while putting on the stockings, meanwhile holding its breath. The child should let out the breath by a slow, very slow action. Don't let the child blow out the air with muscular efforts—just let the air "die out."

You will have to use patience and understanding with the child before this breath-

SOME SIMPLE BREATHING EXERCISES

ing movement becomes natural and unconscious; but it is the only way if you want to bring about the wonderful effects of proper breathing. And remember this: Once this natural way of rhythmical breathing is brought about it continues throughout life, and health and immunity from colds, lung troubles, are secured, and the blood is ever making new red cells.

With heels together, holding, or what it really should be, controlling, the breath so that only a little gets out through puffing cheeks, the child should rise and fall upon the balls of its feet. This exercise develops the calves of the legs and strengthens the back. But it does far more; it makes the diaphragm rhythmically rise and fall, keeps the upper chest from doing more than its share and permits free movement of the lower portion of the lungs.

What is meant in this sense of rhythmic breathing is that the diaphragm will rise and fall in its full strength, is controlled

by the will and habituated to move deeply and so cause a wave or motion to pass over all the internal organs.

Emotions, regulation of heart-beats, movements of breathing, should all be linked so that the control of one organ or function controls the others. This acquired state means bodily and mental poise—that condition which demonstrates an exact rhythm under normal excitement, exercise or elation. Rapid, shallow breathing under excitement shows want of control over breathing muscles, especially that of the diaphragm.

But there are such wonderful underlying forces in really deep breathing that once you form the habit it takes care of the body and its nervous organization. This latter fact accounts for the displacement of rapid, shallow breathing by slow, deep breathing, and the bodily rhythm started keeps the whole system from being upset.

For the adult the same form or any

SOME SIMPLE BREATHING EXERCISES

modified method which will compel stretching and control of the breath should be adopted. Especially valuable will be the exercise of rising and falling upon the balls of the feet. While doing this you must carefully observe the way the breath tries to blow out or get away from your control.

Hold the breath and let it out slowly and only under your control. This is for the development and rhythmic habit of the diaphragm. The young woman will find that, simple as these exercises seem, they will soon bring about rounding curves and red cheeks.

Don't try any stretching exercises with the lungs empty of air. Always stretch on a full breath and while you are holding it. Contract the muscles of arms, legs, whichever group you are working on at the time, while holding your breath. Then relax the muscles and immediately exhale very slowly: the first time through the mouth, afterwards through the nostrils.

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For example: You want shapely hands and wrists. Stretch the arms at right angles to your body. Stretch them until the elbows creak. Bend each finger tensely; squeeze the palms. Now relax and let the breath slowly leave the lungs. Take a deep inhalation; hold it and then stretch some other muscle or group of muscles—legs, neck, ankle—emptying the lungs through the nostrils. When you feel the red blood tingling in the tips of the fingers or in any part, you have stretched and forced the oxygen, you may be sure you are building health and longevity—keeping old age away.

I do not believe there is any advantage in breathing first through one nostril and then through another as is advised by some teachers of breathing. The nostrils are intended to take in oxygen together where the warmed air streams can meet as one and pass to the entrance of the lungs.

There is no more reason to use the nostrils separately and alternately than there

SOME SIMPLE BREATHING EXERCISES

is to run a two-cylinder car first on one cylinder, then on the other. If you suspect trouble in one and use this method to detect the faulty one, all very well. Use the single nostril for this same purpose and for this purpose only.

A splendid way to develop chest capacity, stretch the muscles and learn to control the breath, is to stand in an open doorway with your hands firmly grasping the sides of the door space.

Heels together, head up, let your body fall forward, moving upon the balls of the feet. The body must be held rigid, but not too tense, and go forward as far as possible without letting go of the hand grasp. Swing back upon the balls of your feet until the heels touch the floor. Do this several times, meanwhile holding the breath. Drop the hands to the sides, then exhale *slowly*, first through the mouth and ever afterward through the nostrils. Make no muscular effort at inhaling or exhaling, but

let the diaphragm contract and expand at its own volition.

If you find that this latter muscle is somewhat reluctant to do its full share of work, close your nostrils by pressing your fingers upon them and hold your breath until there is a feeling of *upward* pressure in the abdominal regions. Then release the nostrils and let the diaphragm push out the air SLOWLY. By repeated tests and experience you can readily get control over the diaphragm. And remember that you have not reached the point of deep breathing for health until you have this control over the big breathing muscle.

Persons who have reached middle life can just as surely learn to control the breath as they can their muscles—so can the elderly man or woman if they will stick to it. Controlling the breath is exactly the same thing as controlling any other function where muscular tissues are concerned. Breathing slowly, breathing deeply, holding the air and expelling it as

SOME SIMPLE BREATHING EXERCISES

you will, only is done through control of all the breathing muscles.

Merely holding the breath until you are **FORCED** to let it blow out because you cannot help it, **IS NOT CONTROL OF THE BREATHING MUSCLES.**

If you have strengthened the abdominal muscles you may derive benefit from deep-breathing exercises while lying down in bed. If you have not developed these abdominal muscles this form of attempting to control the diaphragm is somewhat risky because you will naturally resort to the use of the external belly muscles instead of the diaphragm, to press out the eager air.

One could continue to tiresome lengths in pointing out the many ways and methods by which air may be sent to all parts of the body, but understanding the principles and reasons for this necessary accomplishment ought to be sufficient for the reader. Moreover, each individual will find pleasure in devising new and ingenious

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ways to suit his or her individual needs and peculiarities.

“What is life?”

“Life is the interval between one breath and another—he who only half breathes only half lives, but he who uses Nature’s rhythm in breathing has control over every function of his being.”
—*From the Sanskrit.*

THE END

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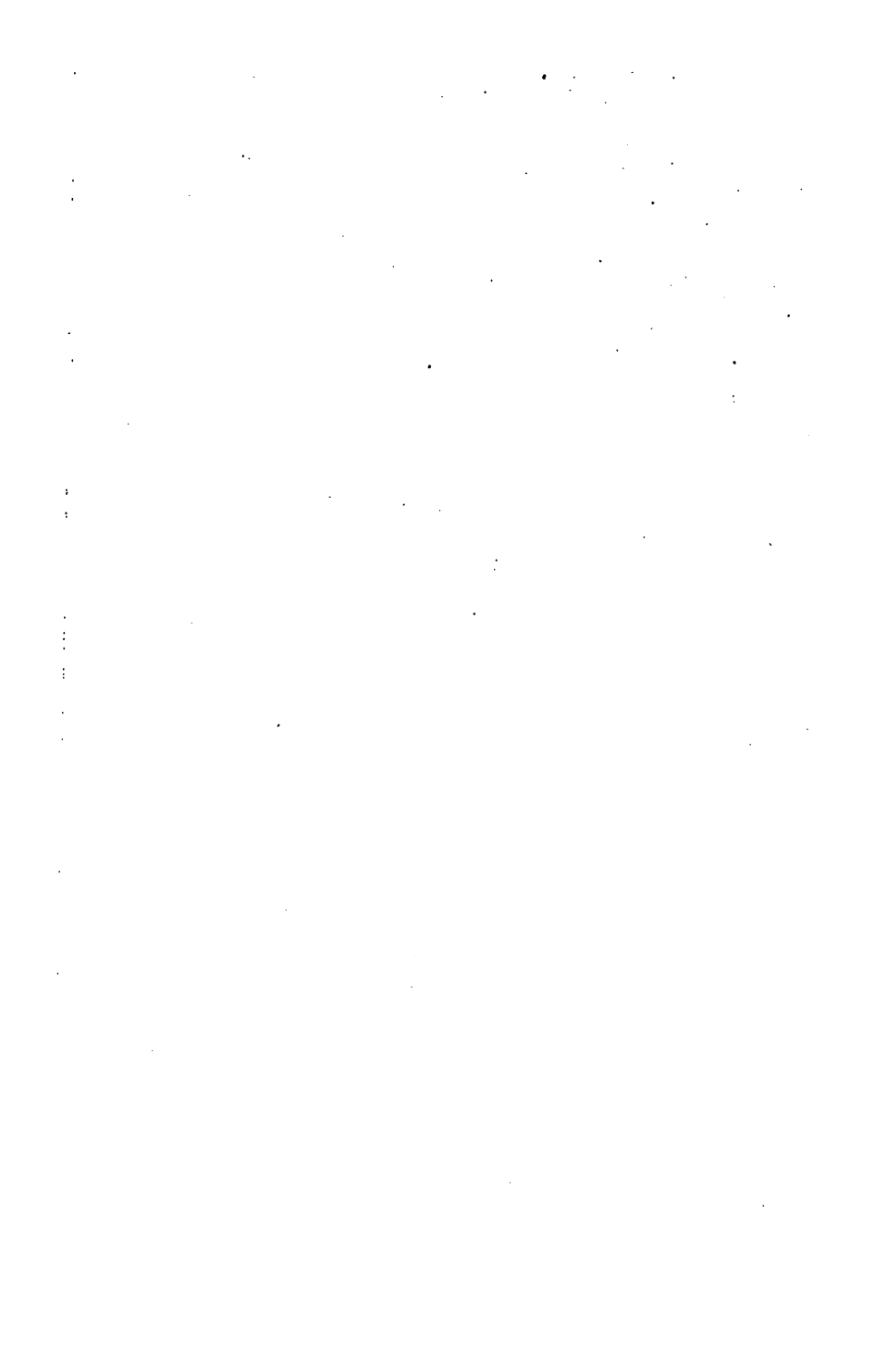
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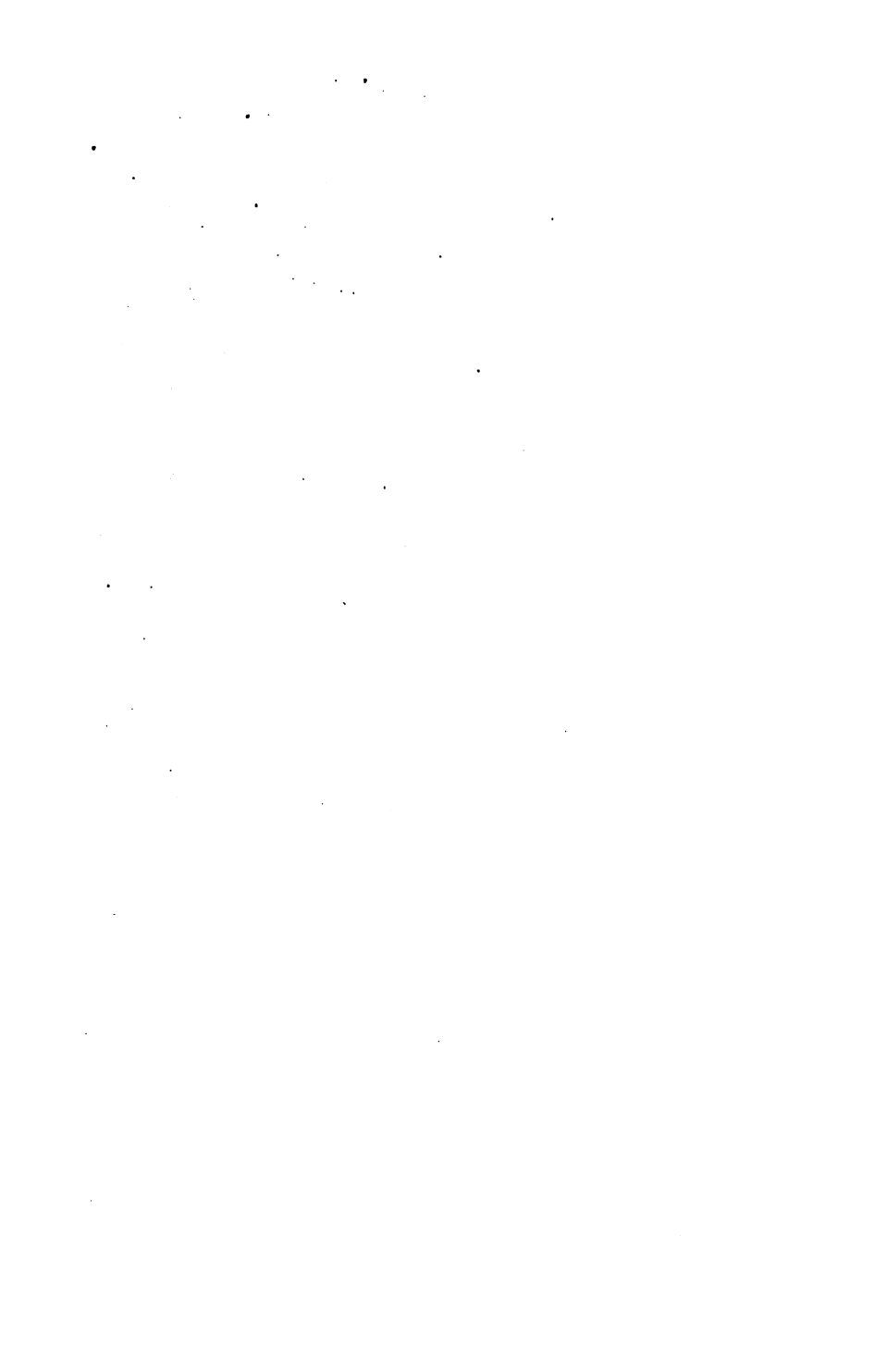
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